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An Address

ON

INSANITY AND EPILEPSY IN RELATION TO LIFE ASSURANCE.

Delivered before the Association of Life Assurance Medical Officers on Oct. 5th, 1904,

BY SIR W. R. GOWERS, M.D. LOND., F.R.S.,

CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL; PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

MR. PRESIDENT AND GENTLEMEN,—I have been asked to bring under your notice the relation to life assurance of insanity and epilepsy. I thank you for the honour done me by the request but I fear that I can do little more than help you to arrive at some conclusions by your own combined efforts. It is only thus that confidence can be obtained. The problems which these diseases present come but rarely under the notice of any single physician. If there is one lesson which rings in our ears in every department of insurance work it is the paramount importance of the aggregate average. I need not, indeed, remind you that it is on this that the whole system of life assurance is based, but it is easy to forget the fact when some striking incident makes a strong impression on the mind. If it concerns a disease which rarely comes before us it is easy to allow its effect to sway us as it would not do if it were balanced and corrected by other observations. The facts must be numerous to permit an accurate average to be obtained and, regarding the diseases I am asked to consider, a sufficient number can only be obtained by collective investigation. The facts vary so much in character that classification is needed as well as collection, if any adequate conclusions are to be reached. Hence it is necessary that the facts shall be as numerous as possible and also that careful scrutiny shall be given to their character and their significance. Great weight may be attached to the opinions of physicians of large and long life-assurance experience. Yet the weight we give even to them may err if we do not know the facts on which their opinion is based. Insurance work rests largely on general medicine. We are all prone to apply to it the experience gained apart from this special department. We are certainly right in doing so. It is a necessity. The greater the general experience of a physician the better are his assurance judgments. Yet it is necessary that we should be careful to keep separate the assurance problems to some extent, because there are questions which are matters of special experience which cannot be adequately solved by general medical knowledge. Therefore we should welcome the opinions which are held but we should also try to discern their foundation and not follow too blindly the authority of others, however great. I express this caution with some emphasis, because the more I have considered the questions I am about to discuss the more I am inclined to distrust even my own opinions so far as they are based on general knowledge alone. You will perceive my meaning better as I proceed.

Concerning the special diseases that are to occupy us this evening, I am sorry to find how little is the amount of personal experience I can adduce. To be of value experience must consist of recorded facts. Every member of the association must have found too often that the conditions under which our work is done are such as to preclude personal record of the facts and problems which come before us. We begin by keeping careful notes of every case and confidently look forward to the time when the accumulated facts will make our experience as precise as it is extensive. But soon the hurried days seem to get more numerous, the work is sometimes too great for note-taking, and in a few years we experience the profound truth of Whateley's saying that "that which ceases to be habitual soon becomes habitual in its ceasing." Doubtless among your ranks there are some remarkable exceptions but I surmise that most of you have had to be dependent on the tables of facts recorded by the lay officers of the assurance company. Assurance companies keep due notes of the general features of the cases which are dealt with, so far as they are needed for office work, but it is disappointing to find how impossible it is to obtain from these the information we frequently desire for the purpose of placing the medical problems of life assurance on a firm basis. It may not be so with all offices but I think it is so with most. I do not know whether the effort has yet been made by this association but it would be most desirable to make an attempt to secure the actual tabulation and classification of the facts of medical importance on a uniform system in every office, so that they could be ascertained for a series of years without much labour and without much time and could be easily combined and classified. Such a scheme would be worth some trouble. It should be simple and not elaborate, but I must not pursue this subject further.

Unable to offer you original facts of sufficient extent I have been glad to have recourse to the valuable description of the medical experience of the Scottish Widows' Fund from 1874 to 1894, which has been published by Dr. Claud Muirhead, to whom everyone interested in the subject must, I think, feel grateful. He has made the utmost possible use of the facts available, which, covering as they do a series of 9163 male lives, possess a value, I think, greater than that of any other collection of facts available to us.

INSANITY.

Although insanity and epilepsy are closely related in causation it seems convenient to consider them apart, at any rate, in the first instance. Moreover, we must separate from insanity all cases of general paralysis of the insane. This is rendered necessary by the facts of its causation to which I will presently refer. The effect of its separation is great. General paralysis causes far more loss to insurance offices than all the other forms of insanity taken together. It probably causes ten times as many deaths and a still larger proportion of loss. Indeed, it is surprising to what small dimensions the mortality of the assured from insanity is reduced when general paralysis is excluded. The cases I have myself met with are too few to be worth mention. In Muirhead's cases they numbered only 12, equivalent to 0·13 per cent. Of the 12 cases, four of them exceeded their expectation of life, and from the facts he gives regarding the others it is probable that the average loss in them did not exceed one-fourth of the amount the office might have expected to receive, and if all the cases are taken together it is probable that the loss would be found to be very small.

Can any actually insane person be accepted for life assurance on any terms? To that my own answer would be "Yes." I would not say that *any* insane person can be accepted, but there are some insane persons who may be taken, of course with a considerable extra, without more risk than insurance offices run every day. No sufferer from acute mania or melancholia could be regarded as insurable. Perhaps many of you would say the same of any person who was under certificates. But that some insane proposers may be safely accepted is shown by the case I am about to mention. Just now I warned you of the danger of forming a general opinion from an isolated case. But isolated cases have their value. They may exaggerate what they illustrate but they may illustrate it all the same. The largest relative profit on a single life which has come under my personal notice was on the life of a man who was a certified lunatic at the time of his assurance, under control in an asylum. He remained so until his death. The insurance was for £5000 with profits. He was 28 years of age at the time it was effected and he was rated up 20 years. He was 88 at the time of his death. The sum which the office had to pay, including the bonuses, amounted to £8000, but this left a clear profit of £46,000. The facts regarding the nature of his insanity are unfortunately meagre; he was insured in 1830 when reports were not so full as they are now, at least, as they are in many offices. He is said to have been imbecile in consequence of epilepsy in early life. He had then been for 12 years in the asylum in which he died 60 years later.

This case affords a striking emphasis on the fact that some forms of insanity have little tendency to shorten life, and I think it would be very useful if this association could obtain from asylum physicians a definite opinion, or rather definite facts, of the risks to life in the various forms of mental unsoundness. I expect such facts are on record if we can know where they are to be found. Chronic imbecility, if not attended with deterioration of the vital organs, is certainly one of these, provided the patient's means are such as to

enable him to secure adequate care. You may have noted that this man was apparently the subject of acquired imbecility. I think that such are better lives than are congenital idiots, who often develop defects of vitality as life goes on. There are cases of paranoia in which a train of delusions has become fixed, has persisted in its limitation, and is innocent in tendency, who may also be regarded as insurable. It is only cases of what may be called settled, stationary insanity which can be thought of as possibly eligible. Cases of incipient, undetermined derangement involve too many uncertain risks and I do not think that a patient who has recovered from a previous attack of definite insanity is within the range of insurance. This is an important point on which opinions may differ and we shall all be glad of the opinions that are based on special experience. A previous attack is proof of personal liability and the precise character of a recurrence is often uncertain. When insurance is possible it can only be at a considerable extra. As a rule the amount of the extra does not prevent acceptance, the conditions which induce such insurance being compulsory. The amount of risk must always be uncertain and the terms should be such as to safeguard the office. I think a general rule, which may be taken as a practical maximum, is to reduce the expectation of life to two-thirds the average for the age and this is done if a number of years is added equal to half the expectation. For instance, at the age of 35 years the expectation of life is 30 years. This is reduced to two-thirds, 20 years, if half the expectation, 15 years, is added to the proposer's age. The rule will be found true at other ages which are within the usual insuring period of life.

What influence should be exerted by a family history of insanity on a life to which no exception can otherwise be taken? The affection of distant relatives would seldom receive consideration but the insanity of a parent, or of an immediate collateral, would prejudice the life to most offices. Yet I have grave doubts whether it is right to regard an otherwise good life as thus brought below the average. I think that there is a tendency to regard a family history of insanity as almost on a level with that of phthisis in its influence on the eligibility of a life. But I would ask you to consider what evidence there is to justify the opinion. In the very few cases of death from insanity which have come under my own insurance notice there has been nothing in the family history to justify even suspicion. In the 12 cases described by Dr. Muirhead he expressly states that in not one was there any indication in the family history of a neurotic tendency. I confess that this is surprising: it certainly suggests the need of a re-examination of the facts on an adequate basis in the light of the more careful reports of the present day. But it is important. On the other hand, a history of insanity in some near relation is not a rare thing in the reports we have to consider. I have not been able to ascertain how often it has been met with but I should think it would be much under the mark to estimate it as 1 in 50 cases—that is, in 2 per cent. But that would mean 180 cases in Dr. Muirhead's 9000. Since there was no family history of insanity in any of the cases in which this was the cause of death we must conclude that in the assumed 180 cases in which at least there must have been such a family history it has proved to be of no significance as regards the duration of life. If these cases had been rated up on account of the family history of insanity, and perhaps they were, the result shows that the rating up was without justification. Of course, this is extremely loose reasoning. I only put it forward as an attempt to discern the direction of the evidence available and not its precision. But when even loose evidence is in one direction it acquires considerable strength; and therefore I think it is most important to ascertain how far fresh evidence supports or changes the indications afforded by these facts. My own insurance experience has not been absolutely small but the facts bearing on this question which have come before me have been very few. Yet, as far as they have gone, they have been in harmony with the conclusion I have given. In the extremely few cases of death from insanity I have met with in insurance work there has been nothing in the family history to put the office on its guard, and I know of no cases where there have been such indications in which loss would have been avoided by attending to them. Thus I feel compelled to submit to your consideration the conclusion that in a perfectly healthy proposer no family history of insanity is ground for regarding the life as below the average, so far as death from this cause is concerned; that a previous attack of mental derangement, or any symptoms of present undefined mental disturbance, should preclude insurance, but that in some forms of established insanity a proposer may be accepted at a considerable extra without unreasonable risk.

The risk of suicide is another problem related to insane heredity. Suicide constitutes a serious cause of loss to assurance offices. In Dr. Muirhead's 9000 deaths no less than 127 were due to this cause—ten times as many as were due to mental derangement. Whether this is in excess of the general average we cannot say. Farr, in his "Vital Statistics," could only adduce the figures for 1838, in which the rate of suicide for the classes which furnish the bulk of assurers was only 5 in 10,000 annually. We do not know the proportion to the number living of assured in Dr. Muirhead's tables and so we cannot make the comparison. But a very important and significant fact is the large proportion which occurred during the first five years of assurance; it amounted to 17 per cent. It is probable that this under-represents the experience in England. Of the last ten claims from suicide at the Guardian office no less than seven were within the first five years. Of course, the total number is too small to be more than suggestive but it would be useful to note whether the experience of other offices is equally unfavourable. It is possible that the facts have been already published. Some years ago it was the custom that an insurance was invalidated by suicide after any length of time but I believe that it is now the general practice to limit the invalidation to the first year. But the number of claims which involve serious loss is such as to make it very important to know whether any indication of this danger can be discerned.

Personal mental depression of definite degree would, of course, constitute such an indication but proposers who thus suffer, or have thus suffered, are, I think, uninsurable on general grounds. In not one of the ten cases to which I have referred was this indication present or to be heard of. It is to the family tendency that we should be inclined to look for guidance but I have been surprised to find how completely this seems to fail. It is unfortunate that Dr. Muirhead has made no examination of the family history in the 127 cases of suicide he records. Their number would have made the evidence valuable. Of the ten cases I have mentioned in only two was there a trifling family flaw. In one case a brother died at the age of 52 years from epilepsy, in the other the proposer's aunt, aged 80 years, had been insane for 30 years. I do not think that, in your opinion, either of these facts would have prejudiced the life. In the other eight cases the family history exhibited no sign of any neurotic tendency. It is thus much to be desired that a more extensive collection of the facts regarding the family history of suicides should be made, and the combined efforts of the members of this Association should secure an amount of evidence of very definite weight. I can only regard that which I have given as an incentive to others. As far as the facts go they do not seem to make the risk of suicide any augmentation of the weight that a neurotic family history would otherwise receive. This conclusion also, I confess, surprises me. The facts seem to show that insurance suicides form a class apart. Insane heredity seems to take very little part in their production. They are apparently due almost exclusively to financial causes and imply a strength of will sufficient to enable this mode of exit to be adopted as an escape from the pressure of impending disaster or as a mode of insuring a secure provision for a family. In this connexion it is noteworthy that the suicide of an assured female is almost unknown. At least, I do not myself remember to have met with an instance. Yet females constitute in most offices nearly 10 per cent. of the assured.

EPILEPSY.

Epilepsy is also a rare cause of insurance claims. Dr. Muirhead met with it only in 40 cases or about 4·3 per 1000 deaths. He justly remarks that it is probable that some of these cases were not true epilepsy but organic disease of the brain, such as tumour. The average age on entry was 32 years, and by combining his three series it seems that the average age at death was 48 years. In no case was there any sign of the disease at the time of the insurance, although one of them is said to have presented a "nervous excitability of the circulation." In only two of the cases was there anything in the family history to arouse suspicion. The mother in one case had "some nervous affection" and in the other

had died in an asylum. Thus, in only one case of the 40 was there heredity sufficient to merit attention. On the other hand, the same consideration presents itself as in the case of insanity; a large number of the remaining proposers who did not die from epilepsy must have presented some family history of it, perhaps in many cases such as to lead to an addition to the life which the result did not justify.

Two other facts concerning epilepsy must also be taken into consideration. One is that it is rarely the direct cause of death even to those who suffer from it. It does, of course, sometimes indirectly lead to death, through accidents which it induces. The influence is not always recognised. Especially is it a cause of death by drowning, by falls, and also by mysterious death during sleep. I believe that whenever a person is found dead in bed, with his face against a pillow, death was the result of a post-epileptic turning-over, which causes the sleep after the convulsion to be deepened into fatal asphyxia. In such cases the occurrence of nocturnal fits has often been unsuspected. A second fact is important in estimating the weight to be attached to heredity. The general age for life insurance does not begin until 20 years of life have passed, but three-quarters of the cases of epilepsy begin before this age. Heredity is influential after 20 years of age as well as before, indeed the proportion of cases in which heredity can be traced only slightly lessens as life goes on. But the absolute diminution in the number of cases commencing after the first two decades of life of course also reduces the effect of this influence. We may estimate that of the total number of cases of epilepsy in only about one-sixteenth is heredity effective after 20 years of age. Moreover, in all these diseases we are unconsciously prone to transfer the lesson taught by the frequent reception of epilepsy from ancestors to its transmission to descendants. Because, in any given case of epilepsy, the chances are nearly equal, or, at least, 1 in 3, that it will be found that there is neurotic disease in the family, we are apt to think that the chances are the same that any given member of such a family will suffer. It is needless, however, to point out how unreasonable is the inference and how vastly it differs from the truth. It would probably be more correct to say that the chances are about 1 in 6 that some child of an epileptic parent will present the disease and that if he has reached the age of 20 years without doing so the chances are perhaps 1 in 50. When to these is added the small influence of epilepsy on the duration of life it is evident that the risk to an office, even from parental epilepsy, becomes very small if a proposer over 20 has presented no symptom of it himself and the risk lessens with each succeeding year of life. But it does not entirely cease and I need not say that which is insufficient alone to deserve weight may increase the effect of other unfavourable elements on the assessment of the life.

There remains the question whether any proposer who actually suffers from epilepsy is insurable. I need not remind you how necessary it is, at any rate in examining a member of a family in which there is a tendency to these diseases, to remember the disguises under which minor epilepsy lurks. Occasional faintness, thought nothing of, occasional giddiness, too trifling to be mentioned spontaneously, may mean definite minor attacks. That which perhaps you may not know is that the same may be the meaning of momentary giddiness on sudden movement. This is commonly dismissed as unimportant, but it will often be found that those who experience this also feel sudden momentary giddiness when sitting still or walking quietly. I think that the form of questions to be addressed to the patient by the medical examiner might wisely include, as they do in a few offices, a definite inquiry regarding faintness and giddiness. Minor attacks have of course the same significance as severe seizures, which indeed they may sometimes conceal. A few months ago a proposer said that he had suffered from occasional faints during many years, which had been recognised as minor attacks of epilepsy. They were only such to his consciousness. But it was ascertained that his tongue was always bitten and convulsion must therefore have been invariable.

I suppose no member of the association would accept the life of a proposer who was subject to frequent epileptic attacks, whether slight or severe. But are all subjects of the disease uninsurable? That is really a matter of individual opinion. For myself I think that some cases can be accepted, of course at a considerable extra, if they have nearly reached middle life and the character of the disease has shown no tendency to become more grave. As I have said, in Muirhead's 40 cases the average age at death was 48 years, but they probably include many cases which were not idiopathic epilepsy. Several of his cases exceeded the normal expectation. I believe that selected cases of epilepsy would be found to reach an average age which could be met by a sufficient extra. This opinion must, indeed, partly depend on the object we have in view of rating up lives. Is it to guard the office against loss or is it to secure to the office an average profit on the lives equal to that which normal lives would afford? This is a question for the lay authorities of every office and I do not know whether it has been fairly considered. My own impression is that in these days of competition it is sufficient to endeavour to secure an office from loss, leaving the average lives to provide the profit. If so, we may run a little more risk than if the object is to make all lives profitable. Of course, we must disregard occasional losses and hope that the future will show that the aggregate has given the required result.

In rare cases I have sanctioned the acceptance of the life of a definite epileptic. About 15 years ago a proposer was being examined by my then colleague and in the course of the examination he fell to the floor in a definite epileptic fit. Inquiry made it probable that it was not the first, although the attacks had occurred only at long intervals. There were special reasons which made it desirable to accept the life, if possible, and he was taken with an extra corresponding to that which I mentioned as applicable to some cases of insanity—an addition of a number of years corresponding to half the expectation of life, reducing this to two-thirds the normal. This meant an addition of 15 years. It is now about 14 years since the insurance was effected and during that time he has not, I know, had another fit, and I think it is now improbable that he will have another. It is much more likely that the office will obtain a considerable profit from his life. To this case, of course, the warning against inference from single cases applies, but so also does the fact that they illustrate in nature that which they do not demonstrate in degree. I need not say that insanity and epilepsy are interchangeable in their course through families. In a family in which one has been prevalent, the other may suddenly appear. But it is rather more common for the type to be maintained and for epilepsy rather than insanity to occur in families in which it is found. I do not think that the fact that the diseases interchange increases the gravity of heredity. I think that the sufferer from one disease thereby escapes the other, as a rule. The chief difference is that the danger of insanity does not lessen, as epilepsy does, after the insuring age is reached.

I may sum up the impressions which I desire to present for your consideration. I say "impressions" because the word "conclusions" would be far too strong to indicate that which I offer only to be tested. I do not think that a family history of either insanity or epilepsy or both, as a rule, need alone depress a life below the average if the proposer is over 20 years of age. The word "alone" limits the statement to lives which are otherwise free from any flaw. An influence to which no one would attach importance by itself may add sufficient weight to other features to necessitate an extra. Moreover, you do not need to be reminded that there are exceptions to every rule. There may be cases in which a family tendency is so strong and is manifested so definitely in collaterals of the same generation as to compel its recognition. In the case of the two diseases previous symptoms have a different indication. In the case of insanity I think a previous attack should, as a rule, preclude acceptance. Whether there are exceptions is a matter for consideration. Previous attacks of epilepsy are generally equivalent to the present existence of the disease. In the case of each disease there are forms which, if developed and stationary, may be taken at a considerable extra without more risk than is often run by most insurance offices. In the case of each, however, the disease must have become established, or rather, I should say, stable, as a morbid condition presenting little likelihood of change. Lastly, the danger of suicide is connected with both diseases, but the practical risk of insurance suicide is not so augmented by the inheritance of a tendency to either disease as to increase the risk of assurance sufficiently to receive practical recognition. I may suggest an example of the evidence which it might be possible for the members of the association to bring forward. If from every office represented were obtained the facts and fate of every proposer during the year 1870 who

presented a family history of insanity or epilepsy we should have some weighty evidence.

To leave general paralysis of the insane out of the consideration of the relation of insanity to life assurance may seem strange—the more so when I say that it apparently causes ten times as many premature deaths as all the other forms of insanity put together. In the record of the Scottish Widows Fund Muirhead recognises that this cause of death seems to have been recognised and designated adequately only in the last of his three septennial periods. In this it caused 52 deaths. If we ascribe to the two preceding septennial periods a proportionate number of deaths corresponding to the total number of cases in each we have a total of 120. This is ten times the number of claims from other forms of insanity. Further, it almost always causes a loss, often serious. This is shown by the cases that have come under my own observation and very clearly by Muirhead's facts. Of the 52 cases only one exceeded his expectation. The average age at death was 44 years. You all know what this means to the assuring office. Hence the question is very important—Can anything be done to lessen this loss? I regret that I think it would be alike futile and unwise to consider this subject to night. The essential problem depends on the fact that the place of general paralysis is beside tabes and not among the forms of insanity. The only possible means that could be adopted, at least so it seems to me, are the following: (1) to ascertain systematically whether or not there has been preceding specific disease; and (2) to ascertain the presence or absence (*a*) of the knee-jerks and (*b*) of the pupil-light action. The recognition of the early symptoms of general paralysis and the difficulties of its diagnosis are outside the scope of this association. No proposer who presents any suggestive symptoms, however uncertain, could be considered for a moment. The subject is thus a wide one, needing very careful consideration and discussion, and it is not within the limits of that which we are met to consider. Perhaps my feeling is the stronger because I despair of any result from the measures I have suggested, or rather I believe the evil of the attempt would more than balance the good. This opinion illustrates how difficult the subject is. I would therefore venture strongly to deprecate any attempt to discuss it this evening.

I have applied the term "impressions" to the ideas I have put before you. They are, indeed, but an attempt to give some shape and design to the subject, which as plastic clay I pass into your hands, and I shall look forward with interest to the form it ultimately receives from your discussion, should any form survive.

[The discussion on Sir William Gowers's paper was adjourned to Nov. 2nd and we hope to give a report of the same after that date.—ED. L.]

An Introductory Address
ON
KNOWLEDGE AND THE METHODS OF REACHING IT.

Delivered at the opening of the Medical Faculty of the University of Birmingham on Oct. 3rd, 1904,

BY P. H. PYE-SMITH, M.D. LOND., F.R.S.,
CONSULTING PHYSICIAN TO GUY'S HOSPITAL, ETC.

GENTLEMEN,—Let me first congratulate you upon the progress which this great University has already made since it received its charter. Like Manchester and Liverpool it has left a connexion with the University of London which for so many years existed, and, as representing the parent body, I may say that we are convinced it was for our benefit as well as for yours. May Birmingham become as noted for learning and national progress as the greatest universities of our own or any other country.

If we look over the history of the connexion between the University of London and its colleges, we see the constant rivalry for importance between teaching and examining. In 1827, when a new institution was founded without the recommendation of age or wealth, with no traditions, and with sadly inadequate resources, there were two directions in which it developed—the one was that of conferring degrees and other academic distinctions only as the result of impartial and external examination; the other was to offer to intelligent youths opportunities for acquiring knowledge independently of wealth or of the trammels of scholastic discipline. At first there was no power to grant degrees, and when it was granted by the foundation of a new university in 1836 it was deemed necessary to separate entirely the teaching from the examining bodies. The whole course of public opinion in the 70 years which have since elapsed has greatly diminished the value attached to competition and greatly increased the value attributed to education as distinct from instruction. One criticism was expressed in the term applied to the University of a "graduating machine" and the other in the nickname applied to the University College of a "knowledge shop."

I think, and you here think, that competition is a valuable stimulus to work, and that many of us owe very much to the necessities of a curriculum; we also believe in the mere accumulation of knowledge, as we see it in clever children whose memory is always superior to their judgment and whose aptitude for imbibing information is as remarkable as their imperfect power of using it. We agree, therefore, that neither competitive examinations nor acquiring facts, even if unconnected, are to be discarded because they have been abused. But if we participate in the public opinion, which on the whole is educated opinion, we shall put before knowledge and before competition in the first place what is properly called education—the drawing out of the powers of the mind, the discipline which strengthens the mental sinews and prepares the intellect by a kind of gymnastics for the duties of which it is capable. Side by side, moreover, with the justly increased importance now attached to discipline and healthy development of mind and body we have also learnt to regard a college or university as a very imperfect instrument for good if it only educates its students and does not at the same time teach them to add to the sum of human knowledge. But these different aims (like other aims which are just and practical) are far from being opposed one to another. It is an admirable thing for the memory to be strong and tenacious. It is an excellent thing for a boy or girl to delight in omnivorous reading, to acquire the art of learning quickly, of discerning the main and important points to be understood, and to form fresh and tenacious receptacles for every new branch of knowledge which they encounter. It is well that by an honourable ambition young men and maidens should be willing to scorn delights and to live laborious days in the hope of attaining the fair garland which adorns the learned brow, and the very power which has been gained by such discipline is that which can be applied to investigation and expansion of knowledge.

I. First, then, of knowledge. A child learns to name objects, then he connects objects with qualities, and in time forms chains of connexion between related events. He learns that sugar is sweet and that fire burns. He learns to trust to the evidence of his senses and to measure distances not only by the eyes and the ears but by the muscular sense of the eye and of locomotion. Before long an intelligent boy is not satisfied with knowing that this or that is a thing with certain colours, shape, and movements. He asks himself how he knows it; and he soon learns that the perceptions of the senses are insufficient. He finds that the combination of two senses corrects mistakes and strengthens his assurance of fact. He learns to make allowance for atmospheric perspective, for the duration of movements and of visual impressions. He begins to detect various delusions into which observation by the senses will lead him. Before long he will have gained the important conviction that all knowledge derived from the senses is but mediate, that it is not the eye that sees or the ear that hears or the finger that feels, that touch and vision and perception of sound and pleasure and pain are processes of the brain, not of the sense-organs. They are states of consciousness and their continuity makes up the course of life. Even in sleep there are dreams and on awaking from sleep self-consciousness recognises the continuity of the time before and the time after unconsciousness.

So much for the development of knowledge by the senses. A further step is taken when a boy begins to reason. In following the propositions of Euclid, in learning the elements of logic, he sees how one fact inevitably depends

upon another. But an intelligent boy will soon observe that the beautiful sequence of argument in mathematics depends for its perfection on the absence of reality. A line without breadth, a point without magnitude, a perfect circle —these are not objects of the senses: they are figments of the imagination. Moreover, the student finds in the domain of deductive logic that a syllogism is open to the defect of pretending to prove what is really stated in the first premiss. The apparently inevitable process of reasoning which ended in contradiction, the logical fallacies like sorites, and the conflicting results of the arguments of nominalist and realist schoolmen led to the conclusion that, however excellent as a method of sharpening the wits, mere argumentation serves only as a sign of warning "No thoroughfare" by this path.

There is, however, as men at last learnt, another method of arriving at true results than that of tracing the intellectual sequence of ideas and stripping natural objects of some of their properties in order to deal with them as flawless imaginations. This course of investigation we call experience or, if we determine the experience for ourselves, experiment, and when experiment is repeated again and again and results are constant then we have on what seems sure ground the proof of the connexion between cause and effect. Moreover, there is a satisfactory test of the justness of our conclusions in the result of fresh experiment. When astronomers were able to predict eclipses they showed that their science was a real and trustworthy one, and so in the art of medicine the all-sufficient proof of diagnosis is the verification of prognosis.

Very soon in the education of the child it is desirable that he should, according to his powers, investigate, that he should try, as one clever child who was afterwards Clerk Maxwell tried, to find out the "go" of every plaything or machine that he observes. It is most important that he should be encouraged to search out for himself, and when he has succeeded in his quest he should be encouraged to remake the object which he has reduced to its elements. He should never be put off by explanations which are delusive; for instance, explaining the fact that one cannot see through a stone wall by the assurance that it depends on the opacity of stone or the fact that we can set paper burning with a lens and sunlight by calling the paper inflammable. In all cases we should try to answer the question "why" by substituting the question "how"; for, as intelligent women often remind scientific men, the explanations of science always leave something else to be explained and carry us but a little way.

It is remarkable how slowly natural science or the investigation of the sequence of events has developed. Logic was familiar to Aristotle and the same great mind that produced the Ethics also produced a wonderfully full and, on the whole, accurate account of the animal kingdom. Aristotle had worthy successors in Archimedes, in Euclid, in Erasistratus, and in Ptolemy, but physics and geometry, anatomy and astronomy, died away with the general destruction of ancient civilisation. The "Physiologus" of the Middle Ages was a successor of Pliny, not of Aristotle. Natural history was not contrasted with natural science but with civil history. The first steps in what we now call science, the theory of the universe, the sequence and dependence of events, were made by the astronomers of the Renascence, by Tycho Brahe and Kepler and Copernicus, by Gilbert the father of magnetism, by Harvey and Mayow the physiologists, by Boyle the chemist. But the work of Newton and the early natural philosophers impeded rather than advanced the progress of medical science by leading to the Iatro-chemical and Iatro-mechanical schools. The pioneers of modern natural history were the collectors, the founders of museums of animals and plants in the sixteenth and seventeenth centuries. Their labours were scorned by philosophers and were treated by intelligent men like Addison and Johnson as laborious trifling. "The proper study of mankind was man," not as an animal or a machine, but in his mental and moral aspect. Even in the nineteenth century "scientific" was an adjective applied to what we now call learned. For three centuries natural history was valued only for its direct use in medicine or agriculture and even in our own day some ancient physicians spoke of morbid anatomy as useless in practical medicine and some scientific men lectured on the "Philosophy of a Candle." Physiology began with the "use" attributed to each several muscle or viscus and was more cultivated in the eighteenth century by surgeons than by physicians.

What kinds of knowledge are most essential for education, considered apart from their practical use? Technical education is an admirable thing, but whenever a boy at school is put on the modern side because he is intended to be a merchant or a druggist, his education for its own sake, his liberal education, has ended. He may go on if well grounded to an indefinite degree of excellence, but he has already begun the important task of providing for himself and those dependent on him. His science is *Butterbrod-Wissenschaft* and he feeds no more on ambrosia. A liberal education is that which brings no immediate profit, which is one from one point of view, useless; and whether a boy is taken from a board school to learn shoemaking, or whether he is taken from the broad curriculum of a public school to learn to be a medical man or a sailor, alike he has finished his liberal education and has begun that which is called technical. Of all kinds of scientific knowledge there are two which seem to me to be almost universally desirable as a means of liberal education. The first is botany, commended by the beauty of the objects with which it is concerned and their abundance in every country, by the need of careful and patient discrimination, by the opportunity and almost compulsion to carry on the interest of the study into mature life. A botanist never need be dull, whatever his trade and in whatever part of the world he lives. Moreover, it is the cleanest, the gentlest, and the least costly of all branches of science. On one ground or other it seems to me to be better adapted for most schools than zoology, anatomy, or geology. If botany is the most convenient and useful science to teach observation, may we not say that the study of physics in its elementary mechanical stages is the most valuable and convenient introduction to scientific reasoning? The actions of the levers of machinery and of those of our own bodies, the expansion and contraction of liquids and solids, the lifting and traction of weights, these are instructive and constantly applicable in daily life. They enable a boy to take an interest in machines of all kinds, to understand the construction and use of candles, of gas-jets, of electric lighting, of bicycles, and of motor-cars. Such knowledge is practical and useful but it also enlarges the mind and adds greatly to the intellectual pleasures of life.

II. There is, however, another method of arriving at knowledge—i.e., at true results—which is distinct in method from those of either deductive or experimental science—I mean the knowledge of literature and of art. In what way can it be said that we know that the Iliad is a great poem, that the "Bacchus and Ariadne" is a great picture? Certainly no process of logical reasoning, no scientific investigation, can demonstrate the fact; and yet it is abundantly certain. The Iliad, as soon as we find it mentioned, was mentioned with admiration; it was admired by the earliest listeners, it was admired still more by the bright consummate flower of Athenian intellect in the time of Pericles. It was regarded with veneration by Virgil, by Horace, and by all great writers since. It only ceased to be admired when its language ceased to be understood; and with the revival of letters its glory has continued increasing rather than diminishing over the whole civilised world. Surely we may say with sober certainty that the Iliad is a great poem.

Again, Titian's paintings were reputed as of the highest excellence while he was living by all the painters of the greatest period. Successive generations have equally admired them and we may now say that ever since his paintings were produced, in all parts of the world and wherever art is cultivated, they are regarded as amongst the noblest and the best. Allowance must here and there be made for prejudice of various kinds, and there is always room for individual preference for this or the other among the greatest and most beautiful works of literature or of art. But the final verdict rests with time, that is to say, with the unchanging conviction of those who are best qualified to judge.

Here, again, we have the final test which gives its sanction to the conclusions of science—the power of prediction; for we would say to anyone who refuses to bow the knee to the masterpieces of classical literature or Italian art, study the subject, make yourself familiar with the writings of Greece or the paintings of Venice or the music of Germany; learn to write yourself or learn to draw. As you gain knowledge and gain skill you will, we can prophesy, feel more and more admiration for the masterpieces of literature or art; and this prophecy has never yet been found to fail.

III. May we not say that in another region of human thought the same certainty of conviction may be gained by practice and by action? May we not say that though it

cannot be proved that truth is better than falsehood, or virtue than vice, yet these conclusions are held more and more firmly by those who daily become better qualified to judge; and that if anyone denies them we may appeal to his conscience—that is, to himself—to bear witness against him. No argument, however subtile, can prove the truth of such beliefs, no experiment can demonstrate their reality; but they are held by all who act in accordance with them, and the longer and more perfectly they are acted on the stronger and more absolutely are they believed. Some ears cannot appreciate the music of Beethoven, some minds have no pleasure in the poetry of Milton, but all can understand the goodness of the great soldier who died at his post in Khartoum, who, unlike most men, "did not wish for money and did not fear death," or the self-sacrifice of the humble priest who deliberately undertook a fatal duty and gave up his life for the lepers of the Pacific.

IV. May I, in conclusion, offer some adages (*ad agendum apta*) which may possibly be of service to those who are students? Learn to use your senses, be quick to notice any changes in the house you live in, or in the clouds and sky, open your eyes to sights of birds and insects as you walk, your ears to their songs, and your heart and intellect to the impressions of nature. Look as well as see, listen as well as hear, touch as well as feel. Practise judging distances and making allowance for different kinds of illumination, learn to detect the optical and sensory fallacies of which you read in books on mental physiology. Exercise not only your muscles but your power of discriminating weights. Cultivate walking and make it a pleasure as well as a convenience. Take every opportunity of learning any bodily exercise, whether riding or swimming, rowing or sailing, and whatever you do do it, as Fox said he did, "with all your resources at the time." Learn, as you may very well without being artists, to draw sufficiently to explain your meaning. Cultivate your memory, form the habit of recalling things at the proper time, and make provision for spare minutes in the day or sleepless hours at night by fixing poems in your memory, or by repeating the geological strata of England, the atomic weights of the elements, the heights of mountains, or the dates of the decisive battles of the world. Never fear filling your mind too full of fresh knowledge or suppose that one fact will displace the other, as water poured into a full vessel adds nothing to its contents; for the more the mind receives the more it will contain, and there is no limit (or none that we ordinary people can see) to the growth of knowledge so long as life endures. Never be satisfied with a sham explanation or with conventional reasons or with argument that will not stand criticism. Beware of the commonplaces of argument, of declamation, and of assertion. Never waste time over worthless literature and in order to be sure of what is good read chiefly that which has withstood devouring time and remains to us as the carefully winnowed and approved result of the imagination, the wisdom and the wit of past centuries. Beware of prejudices, prejudices of your profession, prejudices of your education, prejudices of your country. Remember that all that you think of England, and which you rightly ought to think, is also thought by French and Germans and Americans and Hungarians and Chinese concerning their own country; the strength of its inhabitants, the beauty of its women, the courage of its soldiers, and its excellence in all the arts and refinements of life. It is not without reason that Frenchmen speak of *La grande nation* and Germans of *Deutschland über alles*, but such phrases do not lend themselves to translation. Remember that in the important department of popular education little countries like Saxony and Scotland were for many years far ahead of larger and wealthier nations. And of all nations since the Reformation the most remarkable achievements in war and in navigation, in exploring and colonising, in art, in learning, and in science, have been gained, not by the great nations, but by the little people of the Netherlands.

Here in Birmingham you are rightly proud of your municipal record. Just as this civic emulation does not diminish but strengthens your national patriotism, so believe that the glorious history of these little islands does not need disparagement of our neighbours. By knowledge of their history, their science, and their literature, by sympathy with their great qualities, we become more fair-minded, more liberal, and more humane. In literature, in science, in manufactures, in pathology, in preventive medicine, our fathers have left us a noble heritage; let it be ours to hand on a still nobler one to our children.

An Address

ON

THE RELATION OF THERAPEUTICS TO OTHER SCIENCES IN THE NINETEENTH CENTURY.

Delivered at the International Congress of Arts and Sciences at St. Louis, U.S.A., on Sept. 24th, 1904,

BY OSCAR LIEBREICH, D.C.L. OXON., M.D. BERLIN,

PROFESSOR OF PHARMACOLOGY IN THE UNIVERSITY OF BERLIN.

GENTLEMEN,—Every political historian will prefer to trace the development of a period of history from one distinct event. A chronological introduction cannot be of such importance to him as historical survey, in which events of great moment form the basis of a new development. What is true of political evolution applies also to the growth of every branch of natural science and medicine. The first year of the century, though filling men with joyful confidence and new hopes, has not the same attraction for the investigator; and yet, in order to obtain a general view of the growth of the different branches it is desirable not to lose sight of this idea but to consider all the stages of progress in common from a certain point of time and thus the study of the history of therapeutics must also be subordinated to this aim.

Although the evolution of the nineteenth century has frequently been threatened by heavy political clouds we have seen them often pierced by the sun of progressive science which, especially in that century, has called forth a fertility of culture such as has scarcely been witnessed in any previous period of 100 years. The past century more than any other has been distinguished by the multitude of newly discovered facts in natural science, as well as by the perfection and extension of the ideas of great discoverers of the previous century. It is the age in which the greatest progress in natural science has been made. The vast numbers of new discoveries in medicine have lessened, or even almost suppressed, on the part of many persons, the feelings of admiration for each new acquisition. The new phenomena and experiences which confront us on all sides surpass the wildest dreams described in former centuries as the eccentricities of fanciful minds. The abundance of material compels our admiration and allows the astonished eye no time to gaze long at one occurrence, for new impressions already crowd it out.

The nineteenth century has spoiled us; our demands for new acquisitions increase and we grow impatient to know more. In this unsettled state the laborious work of the individual often seems lost but the true scholar is buoyed up by the gratifying knowledge that mighty buildings can only be constructed of a mosaic made up of single stones. Yet, truly, humanity often settles down in a new building without admiring either the work of the architect or his material. Moreover, the capability of enjoying nature and whatever we have added to our knowledge of the universe by laborious experiments does not appear to be a natural gift of man. Only education and culture can awaken the enjoyment of what is and of what is about to be. Mighty natural phenomena, indeed, fill the casual onlooker with admiration but the observation of what is harmonious in nature and the capacity of assimilating it for our own culture can be gained only through education. This also holds good of art and it is even more difficult in science. Since the uneducated majority is often inclined to pass by the greatest events with indifference the nineteenth century has spared no pains to inform humanity of all the great innovations, to educate them, and thus to gain friends for the progress of civilisation. This, indeed, is the object of your congress.

There are various ways in which therapeutics (and it is here chiefly a question of pharmacodynamic therapeutics—that is, such as concerns itself not with mechanical means but with chemico-physical processes) may develop. New knowledge of the conditions of life of the organism often leads to remarkable discoveries in therapeutics. Thus

physiology, especially the functions of the different organs, is of the highest importance for the progress of therapeutics. A striking example of this is furnished by digitalis. Originally this plant was simply a popular remedy which, like many substances in use among the people, proved efficacious in the case of many diseases while, of course, of no avail in others. When William Withering in 1785 undertook a careful examination of digitalis it was used for phthisis, dropsy, and scrofula, it is true, and its power of slowing the pulse was known but was not utilised therapeutically. A proof of how little significance was attached to these purely clinical experiments may be found in the changes as to the admission of digitalis to the London Pharmacopœia. In the year 1721 it was included, in 1746 rejected, and not re-accepted until 1778. Now in the year 1846 Weber made the surprising discovery that the vagus nerve has an inhibitory influence upon the heart—that is, that exciting this nerve causes slower pulsation and that cutting it occasions extreme acceleration of the action of the heart. This decisive experiment formed the basis of Traube's clinical investigations and he was able to prove that the effect of digitalis on the heart corresponded to the excitation or section of the vagus nerve. This fact has been utilised clinically in diseases of the heart, arteriosclerosis, and dropsy—and now upon a firm basis—so that digitalis has emerged from its former position of uncertainty and taken a place among the efficient and trustworthy remedies and we can safely say that it will not again disappear from the pharmacopœia—at any rate, not owing to any uncertainty as to its effects.

Such investigations have now been undertaken with a number of other preparations and on a large scale, such as, for instance, the clinical researches of Sir Lauder Brunton on "casca" (erythrophlœum) and of Sir T. R. Fraser on strophanthus hispidus, a plant similar to digitalis, but differing in its effect on the vaso-motor system and which was also soon adopted in therapeutics. Much the same may be said of atropine which, chiefly through the knowledge of its physiological effect on the iris, on the non-striated muscular system, and the glandular secretions, affords us an exact indication of its scope of utility in disease. Thus, we have here a source of fresh observations. Often the functions of the organism are affected in an isolated manner that we should scarcely have thought possible—for instance, by yohimbin. This physiological method is applicable to all chemical bodies and the progress in our knowledge of curative powers depends solely on the progress of experimental physiology. The physiological action, however, does not always remain within the limits of what is normal, for it may sometimes become pathological. This was remarked by various scientists as early as the middle of the eighteenth century and shortly before the beginning of the nineteenth century (1799) A. Fr. Hecker expressed this view in his "Physiologia Pathologica"—i.e., in "the theory of the composition and functions of the human body and its different parts in an abnormal condition."

How differently we may view physiologically active bodies can best be seen in the blood. But here, too, we observe that a rational system of therapeutics only became possible in the nineteenth century after a knowledge of the physiological effects had been gained. Berzelius was the first to recognise the presence of iron in the blood. The discovery of a ferruginous colouring matter of the blood, hæmoglobin, did not follow until much later. It is true that in 1854 Wöhler declared globulin and hæmatin to be contained in the blood corpuscles. But Funke (1852) and Lehmann (1853) had already established the fact that the colouring matter of the blood, hæmoglobin, is a distinct crystallisable substance which is capable of absorbing and giving off oxygen. Hæmoglobin, we may say, is, to a certain extent, the quintessence of the respiratory activity. This function may be destroyed by inhaling carbonic oxide which enters into so close a combination with the colouring matter of the blood that its respiratory function ceases. Thus blood in such a state is a menace to life which cannot be obviated by any drug but we are able since the respiratory function of the blood has been understood to avert this danger in most cases by removing the poisoned blood and transfusing fresh blood. The greatest hopes for the further development of therapeutics are raised by the fact that chemical substances are capable of restoring pathologico-physiological processes to a normal state. Here we may cite the antipyretics, which are able in the most striking manner to reduce to the normal state a rise of temperature—that is, a febrile phenomenon. The drugs just mentioned are therefore of great importance in therapeutics as symptomatic remedies. Of course, they are in no way able to destroy the cause of disease but merely alleviate or avert injurious symptoms. For the physician, however, this very quality is of paramount importance in the majority of cases. The cause of disease may disappear through the spontaneous healing process of the organism, while the symptoms are removed which, had they been left alone, would inevitably have led to the death of the patient. Yes, we may say that it is one of the greatest aims of therapeutics to treat disease symptomatically, for we must endeavour to ease the sufferings of humanity and the great advantage of this method of healing becomes specially evident when the cause of sickness cannot be destroyed by any remedy hitherto known. This may best be demonstrated in the treatment of poisoning. If, for instance, through a mistake, or for any other reason, a deadly dose of strychnine enters the system the sufferer will die under the symptoms of suffocation caused by the convulsive contraction of the respiratory muscles. As, however, we are enabled to arrest this spasmodic contraction by means of chloroform, chloral hydrate, and other drugs, we can thus give the system time to eliminate the strychnine causing the illness. This being entirely thrown off the morbid phenomena also disappear and complete recovery soon ensues. It is possible, though as yet unknown, that purely symptomatic remedies may also influence the cause of disease.

At the beginning of the nineteenth century chemistry was still of little service to the science of medicine. True, Lavoisier's greatest discovery in regard to metabolism in the organism was known—that is, that the oxygen of the air causes combustion and when inhaled accomplishes the same object in the system. This must have given medical men an entirely new perception of the processes of life but the time had not yet arrived for experimental work on this subject. Even at that time numerous elements were known, 30 in number, whereas at the end of the century 76 elements had been found. A number of these elements were made use of in therapeutics in a pure state or in combination, without our being able to base their application upon rational theoretical hypotheses, as, for instance, in the case of iron and its compounds, the use of which extends to the remotest times. On the other hand, there were among them elements employed as drugs, such as antimony, which first came into use in the Middle Ages and which may be cited less as a proof of the therapeutic value of this metalloid than of the antiquated prejudice of a French faculty which absolutely refused to acknowledge any "drug" owing to its predilection for blood-letting. The rage of dogmatic physicians may be recognised in the words of the anathema against Torpet.[1]

On the other hand, the science of therapeutics placed great hopes in the isolation of alkaloids, which marked the beginning of the century. This era began with the recognition of the importance of morphine by Sertürner in the year 1804. Then followed the discovery of nicotine by Vauquelin in 1809, quinine in 1811, cinchonine in 1820, and of strychnine in 1818. This, at any rate, suggested the method of obtaining from extracts, frequently encumbered by useless matters, the active principle, and making it available for therapeutics, and hence a certain practical utility must even nowadays be accorded to pharmaceutical chemistry. As regards a knowledge of the mode of action, however, the problem not only lies in the chemical composition and recognition of the substance employed but also in the chemism of the organism. Outside the organism it is a lifeless substance, but in the system it is not only the substance itself but its metabolism and manner of action which must be taken into consideration. The theory of metabolism can only be of decisive value for therapeutics when not only the properties of the drug applied but also the chemical action of the organism are so far known as to enable us to judge of their mutual effect. For this reason, of course, a knowledge of the chemistry of the human system is of the greatest importance. Just a year previously to the beginning of the nineteenth century the urea which appears in well-formed crystals in the human organism was discovered by Fourcroy and Vauquelin. This fact certainly did not appear so strange since crystalline matters had already been obtained from plants, but even in the beginning of the century the idea was still firmly rooted

[1] Cf. O. Liebreich, Die Historische Entwicklung der Heilmittellehre, Lecture, Berlin, 1887.

in the mind of the naturalist that these substances could only appear as the products of vital energy. This presented itself to the minds of men of that time as an entirely distinct force which, independent of physical and chemical laws, manifested itself in a characteristic form in the organism. There is no discovery which has so often been quoted in the interest of the medical and other biological sciences as the observations of the chemist Wöhler who, in 1828, observed the formation of urea in a substance obtained outside of the system—namely, ammonium cyanide, by the transposition of atoms. But if we rightly consider this grand discovery, which completely refuted the followers of the theory of vital energy, it would still perhaps be possible, in spite of this discovery, to undertake the defence of the theory of vital energy as something beyond the laws of natural science, for neither Wöhler's synthesis nor the manner of formation of urea from carbonyl chloride and ammonia, or from ethyl carbonate and ammonia, or from cyanamide by hydration, or from ammonium carbonate, as well as from leucine and from other substances of the organism, gives any actual explanation of the formation of urea in the system. The synthetic product is identical with the product of the organism, but the synthesis, or rather the formation, of urea in the body takes place in accordance with laws the exact nature of which we do not fully know even at the present day. This is, indeed, the case with a large number of other substances derived from animals or plants. Although the chemical constitution of substances was constantly more and more exactly defined in the course of the nineteenth century the manner of formation in the organism still remains hidden from us. We frequently find it stated that we must not simply compare the processes of the organism and the test-tube experiment of the chemist. There is no doubt that processes of metabolism take place within the body for which the synthesis performed outside of the organism gives no explanation. From my somewhat dissentient attitude in regard to the conclusions drawn from Wöhler's experiment I might for a moment be thought to favour the view that the activity of the organism in the form of vital energy is beyond the laws of natural science but that is not the case. Even if in synthetic experiments other means are employed than are avilable within the organism, the supposition is justified by the possibility of synthesis, that the organic processes occur in accordance with purely physical and chemical laws, but that other conditions not present in test-tube experiments also play a part.

Here we must turn for a new mode of thought to Schwann's magnificent discovery of the animal cell. Through it the anatomical conception of the organism was placed upon an entirely different basis. As human tissues consist of cells and the entire development of man results through cell activity this must naturally lead us to assume that the purely chemical part of human existence takes place in as many cells as the individual possesses. That which in chemistry we describe as a reaction must, if we leave out of the question the chemical processes in the digestive tract, take place in small separate spaces such as the chemist never employs for his experiments. The chemist does not usually assume that reactions occurring in such exceedingly restricted spaces differ from those which take place in the vessels used for his operations. It will be the task of the biologist to investigate whether this chemical action in the cells undergoes any modification through limitation of space.

I have been able to prove, in the course of investigations on the "dead space in chemical reactions outside the organism," that powerful phenomena of friction take place here. This could not be definitely proved experimentally in the case of all reactions, but sometimes it could be shown that if the space inclosing the fluid be diminished the reactions in comparison with those which occur in larger spaces are retarded, if not completely arrested. The objection might be raised that in these experiments the retardation or arrest of reaction was generally due to the nearness of solid walls but it was observed that the same phenomenon is noticed when the boundary of the fluid is only formed by surface tension, for the tense surface behaves like a firm elastic membrane towards the fluid, as is the case with many cells. The results showed that whenever the friction of the liquid increased the chemical reaction was retarded. This hindrance of the reaction in small spaces, which differs in the case of different reactions, naturally permits the conclusion that, contrary to what happens in large spaces, in small ones entirely different reactions will result. Of course, this observation can only serve as the initial proof that the chemical action in the cells is unlike that which occurs in test-tube experiments. We see that here, also, the argument for the acceptance of the theory of vital energy which I pointed out to you as possible is refuted.

As regards drugs and their absorption, these chemical processes probably play an important part, for we observe that reactions occurring outside of the organism do not take place within it and, on the other hand, combinations arise which are difficult to produce externally. Here I may mention, by way of illustration, the facility of decomposition of common salt into hydrochloric acid and alkali. Moreover, I should like to remind you that, for example, in the toxicological processes in poisoning with carbolic acid we were entirely unable to foresee that the sulphuric acid of the organism forms with the carbolic acid a complex sulphuric acid which, being non-poisonous, arrests the toxic effects of the carbolic acid. Starting from this consideration it does not appear strange that a number of substances which, even when much diluted, have a destructive effect on bacteria, manifest when taken up into the system no trace of disinfecting power, such as, for instance, phenol itself and corrosive sublimate in cases of anthrax. The simplest example that the discovery of the cause of disease is by no means decisive in therapeutics may be seen in the development of the trichina. It is a humiliating fact that we are entirely powerless against this enemy. Even the female trichinæ developing in the intestine after the consumption of meat infected with these parasites cannot be made innocuous by any known anthelmintic, and we are not even able to expel these intestinal trichinæ by means of purgatives. The embryos wander irrevocably into the muscular tissues to destroy the organism or by encapsulation remain permanently in the man or animal. Even in this process of calcification of the trichinæ we are quite powerless to intervene.

The nineteenth century has been distinguished by the discovery of the causes of disease. But this does not give us means of "curing." As the history of therapeutics, however, shows that in the case of serious maladies, such as syphilis and malaria, the remedies have been found long before the recognition of their cause, we must continue to search for remedies independently of the causes of disease. So far the knowledge of morbific agents has been more important for prevention than for cure. On the other hand, remedies like iodoform are entirely ineffective on bacteria outside the system, whereas after the entrance of this substance into the cells an energetic force is opposed to the invaders. As in every observation, we must be careful not to draw too far-reaching conclusions, because the possibility of reactions taking place outside of the organism may also hold good within it, as, for instance, in the treatment of lead poisoning. Therapeutics, thanks to Melsens, celebrated a great triumph here, for the iodine of the iodide of potassium administered in this disease combines with the lead united to the albumin molecules, forming iodide of lead, and can then leave the body dissolved in the alkaline juices of the organism and thus bring about a cure.

It may be said in passing that in the case of many active substances specific chemical processes take place as are, for instance, seen in phosphorus poisoning. Phosphorus, though usually so easily oxidised when absorbed, is not oxidised quickly enough by the oxygen of the cells; in the presence of turpentine oil, however, a transference of the oxygen occurs and the phosphorus is more rapidly oxidised, combines with the oil of turpentine and, as we must assume, forms turpentine phosphoric acid, which is innocuous to the system. By the ingestion of oil of turpentine the organism can thus overcome the cause of illness. Unfortunately we do not possess similar remedies for some other toxic morbific agents which are taken up by the cell.

Since for the progress of therapeutics it is necessary to consider the chemical and physical qualities of the body, therapeutics is naturally dependent upon progress in chemistry. Although, as has already been shown, pharmaceutical chemistry can be utilised for the benefit of medicine the results of theoretical chemistry have not as yet become of much distinct importance for therapeutics. In the first half of the nineteenth century distinguished chemists occupied themselves with the laws of matter independent of biological processes. Various chemical and physical theories followed each other and the theories propounded by Dumas.

Gerhard, Williamson, and Kekulé eventually developed into van't Hoff's stereo-chemistry and in the physio-chemical researches. But these discoveries, though made outside the limits of biology, came to be of great importance to medicine when medical chemistry, fostered both by chemists and physicians, began its growth. In the beginning of the century theoretical views in regard to drugs had to contend in part with the philosophical tendencies of those times, in part with the ill success which formerly attended the iatro-chemical and physio-chemical schools of physicians. Progress in the application of therapeutical measures was left to pure empiricism and the view was accepted that what applied to food would also do for medicine, for we became acquainted with the use of coffee, tea, chocolate, potatoes, &c., not through theory, but simply through empiricism. This standpoint could be justified all the more because many important remedies, such as quinine, arsenic, and Peruvian balsam (which last substance has almost led to the disappearance of a contagious disease similar to leprosy in its terrible forms), became available to humanity purely through empiricism and not as the result of scientific investigations. Similarly, balneotherapy is of empiric origin; only recently, owing to the physiological researches of Winternitz and others and the application of physical chemistry, has it assumed the dignity of a separate branch of science. In consequence of a false point of view and empiricism the creative ideas of a Paracelsus were forgotten.

The progress in the chemistry of organic substances offered an opportunity to combine chemical and medical research, especially in the province of therapeutics. I myself have had the pleasure of seeing that by this coöperation of medicine with organic chemistry an impulse has been given to therapeutics which, in spite of certain opposition, cannot again disappear from the sphere of research, an opinion which was held and expressed on the part of chemistry by the late A. W. von Hoffmann. A good example is furnished by chloral, a drug formerly belonging to the chemical rarities, because Liebig's method of production provided no means of obtaining sufficient quantities for experimental medical research. This body was known as a chemical substance as early as 1832 but its intrinsic therapeutic value was not discovered until the year 1868. It is in America more than anywhere else that these investigations have received the fullest appreciation. The use of chloral hydrate was based upon the idea that when taken up into the blood a splitting off of chloroform takes place, as is the case outside the organism in the presence of all alkalies. This point has been the subject of much controversy. There can be absolutely no doubt that whenever chloral has had no soporific effect a considerable quantity of urochloralic acid can be found in the urine which must be traced back to the chloral. It is equally certain, however, that small quantities of urochloralic acid always are to be found in the urine after the administration of chloral. But it is just as true that the main therapeutic effect depends on the formation of chloroform. Only those who consider these principles will, as is shown by clinical experience, be able to observe chloral in the full unfolding of its effect. Shortly after its effect had become known the Glasgow clinician, Russell, proved that in conditions of excitement in typhoid fever owing to the marked increase of the alkalinity of the tissues small doses of chloral hydrate through their decomposition manifest the same effect as that produced only by large doses in similar conditions in other diseases. On the other hand, in gout the opposite happens. Even large doses do not produce the desired effect, since alkali is lacking for the decomposition.

But we cannot judge of all organic bodies from the standpoint of decomposition. Many take up substances from the organism and since the discovery that benzoic acid becomes hippuric acid and salicylic acid changes to salicyluric acid it has been proved that the opposite of decomposition takes place with a number of drugs. Furthermore, it does not seem impossible that many substances unite with the disease products formed in the organism. This hypothesis may be supported by the fact that the system itself produces an acid, such as glycuronic acid, which carries off foreign substances from the organism, such as camphor, phenol, &c., in the form of a double combination.

Since the time that chloral came into use organic bodies have been particularly investigated. Owing to the tremendous amount of material there has been a tendency to place reliance upon the chemical composition in making a choice and it has been assumed that the chemical constitution stands in a certain relation to the action of a drug. Many experiments have been made in this direction. We do not wish to deny that such an influence occasionally exists: at any rate, we see that when the action of a given substance is known changes in the molecule will produce a difference in action, and that by the introduction of certain groups certain definite changes in the effect may be expected. Among this group of bodies is antipyrin, in which changes in the side chains leave the nature of the effect pretty much the same, even though new therapeutic advantages are obtained, as is best seen in pyramidon. A similar example is offered by veronal, lately suggested by E. Fischer as a soporific. But it is as yet impossible to predict the effect of a chemical body from its constitution, unless a decomposition-product of known action is formed, as in the case of chloral hydrate, or unless an active and well-known nucleus forms the basis of the substance. There are, of course, examples which point to the connexion between constitution and effect, such as the difference between the action of bi- and tri-chlorinated aliphatic combinations. The trichlorinated bodies have a lethal influence on the heart; the bichlorinated bodies, such as chloride of ethidene, only on the medulla oblongata. If trichlorinated butylaldehyde (butylchloral) is administered to an animal only an effect on the medulla oblongata is produced in spite of the triple chlorination. The reason of this is that allylchloroform is formed in the organism which, not being stable, splits up into dichlorallylen, which is a bichlorinated body.

Owing to the progress in chemistry medical science has been enabled to determine the relation which certain new drugs by reason of their composition bear to other established remedies of known constitution. This has been demonstrated by Gaetano Vinci in eucaine, the composition of which is analogous to that of cocaine. Eucaine is a drug which is truly fitted to replace cocaine on account of its more slightly poisonous nature, especially in the form of its lactic acid salt. It has frequently been assumed that certain atomic groups in the molecule are the bearers of a special action and that accordingly the bodies of a chemical series must exhibit a similar effect. That is, however, by no means the case, for even formic acid and acetic acid manifest markedly different biological properties. In alcohols the theory is founded on the presence of a certain chemical group, which is spoken of as the alcohol group. But we see this group appearing threefold in glycerine and yet no physiological connexion between the effect of common alcohol and of glycerine can be established.

In general we must confess, however, that we cannot as yet speak of a relation between constitution and effect because what we call effect must be regarded as an influence on the different functions. Even if we consider the apparently so simple mechanism of sleep we must remember that it may be induced by an influence on the brain or equally as well by an action on the periphery. We cannot here enter into a physiological analysis of the processes taking place in the organism, but as the above example shows, the most diverse parts of the system may be affected, so as to produce a similar result. Moreover, the different hypnotics, although fulfilling the same purpose, have an entirely different composition. On the other hand, when investigating the action of chemical substances we may always expect new results to become manifest by chance, for when Baumann was studying the effects of sulphonal it had never occurred to him that this body might possess soporific powers. We can best see the prominent part played here by chance in the introduction of salicylic acid into therapeutics. After Kolbe had succeeded in synthetically producing this acid, which is normally contained in the bark of the willow, he thought that it would exhibit disinfecting properties within the system by its decomposition. This decomposition does not, however, occur. Yet Kolbe's idea has led to the clinical application of this substance and the valuable results obtained by Stricker from the use of salicylic acid in acute articular rheumatism, although it is not by any means a specific, have stimulated to continuous researches, most fertile for therapeutics, upon the various salicylic preparations. It is not impossible that, starting from this small therapeutic field, the indications for the use of salicylic preparations may be greatly extended.

Even though the constitution of a chemical body gives us no firm basis for pharmacodynamic investigations, we can

yet derive the most varied hypotheses from it. In pharmacodynamic research we may uphold the same principle which Claude Bernard expresses—namely, that by promulgating a hypothesis we are led on to experimental research the solution of which may be of the greatest importance. G. Gore expresses his opinion in much the same way: "A discoverer is a tester of scientific ideas; he must not only be able to imagine likely hypotheses and to select suitable ones for investigation, but, as a hypothesis may be true or untrue, he must also be competent to invent appropriate experiments for testing them and to devise the requisite apparatus and arrangements."

The science of therapeutics quite properly does not follow a one-sided course but seeks aid in all directions, and since the results of the exact natural sciences are not yet ripe to guide us clearly we must take into consideration what has been gained by practical experience for it would be a false principle to condemn popular medicines without examination. At the beginning of this lecture the successful application of digitalis was already mentioned. And here we must not entirely neglect the historical side of empiric observation. Frequently even the most absurd practices are based upon theory. When we turn away in disgust from the unclean excretory products of animals used in ancient times and by Asiatic nations, which we now regard as the very outcome of folly, we cannot ignore the fact that even this practice was founded on theory though a false one. This is proved by Pliny who tells us that animals eat and digest plants, but the medicinal part is not absorbed by the organism but excreted, for which reason the fæces contain substances curing human ills. These prejudices remained for centuries, as is proved by Paulini's book published in 1697, but which can now be read only with disgust. Such excretions as musk and castoreum, which are undoubtedly of value, should by no means be rejected. But particularly the nineteenth century has directed attention to the question, whether the products of the organs themselves or certain substances contained therein might not be employed as remedies.

It was no easy task for Brown-Séquard to prove that the principles contained in the testicle of animals exercise a stimulating and exciting influence on the system. The discovery of spermin crystals, their occurrence in various organs, and the decidedly stimulating effect produced by these substances reminded physicians that creatin, which had already been obtained from meat extract, had an effect similar to that produced by the salts of potassium on the animal body. This, as we may say, weak connecting link yet led to the further development of a principle in therapeutics. Medical chemistry has already succeeded in obtaining from the organism substances which may be of the greatest importance for therapeutics. You all know the effect of thyroidin on the system. Obviously the active principles here are albuminoid bodies, the peculiarity of which has already been partly explained by Baumann in that iodine is one of their component parts. Probably no one would have imagined that this element must be regarded as one of the constituents of the human organism. The very much studied question of the constitution of albumin will naturally lead to a more exact knowledge of the different kinds of albumin which are of value therapeutically and open a new field of observation to pharmacology. The most surprising feature in the action of substances of the organs is presented by the constituent of the suprarenal capsule, adrenalin, not an albuminoid body it is true. In order the better to illustrate the importance of the new domain the following pharmacodynamic experiment may be mentioned. Doses of cocaine which are absolutely fatal to animals are easily borne in the presence of adrenalin without any injurious effect whatsoever. These substances, as they are found in the body of animals, are certainly of importance for the life-processes themselves. Taken from the animal body they have the same effect as the human product and can thus be employed as curative agents in man.

But medical chemistry had already undertaken researches which were not indeed utilised therapeutically at once but came to exert great influence on therapeutics. In 1869 Zuelzer and Sonnenschein proved that alkaloidal bodies may be formed by the decomposition of the organic substances of the organism and later the theory of toxins was derived from this observation. This, again, has led to von Behring's remarkable and far-reaching theory of the anti-bodies formed in the organism.

How to make the substances obtained from the bodies of animals useful for therapeutics depends upon the state of our physiological and chemical knowledge, and especially on the train of ideas arising in connexion with these subjects. This can be seen, for example, in the case of the esters of cholesterin, the composition of which was already discovered by Berthelot, but not in connexion with biological investigations. On the other hand, cholesterin esters had been observed in the form of wool-fat and the impure product was used medically and cosmetically even in ancient times for its curative powers. It was proved that a functional significance as regards the animal organism must be attributed to cholesterin esters, for they are present in mammals, birds, and all creatures whose external surface is of keratinous character. They give lustre to the skin but act chiefly, so to say, as a protective varnish. The white substance of newly-born children is therefore very properly termed cheesy varnish (vernix caseosa). It was formerly thought to consist of glycerine fat but it is actually composed of cholesterin esters. The higher members of these esters are characterised by the physiological properties of wax. Gottstein has shown that this substance offers no food for microbes, is very stable, difficult to saponify, and not decomposed by the oxygen of the air, as are other fats. Thus it forms a protective matter, especially effective by reason of its waxy nature, and this has led to the production and application of therapeutic substances similar to cholesterin ester, as, for example, fetron.

The influence of pathological anatomy on therapeutics belongs entirely to the nineteenth century. To John Hunter in England and Bichat in France belongs the credit of freeing pathological anatomy from the brainless descriptive scientists and of forming it into the necessary basis for every form of progress in therapeutics. From this time until Virchow's labours, the decisive importance of which is recognised impartially by all nations, pathological anatomy has exercised a great influence upon medical activity. Cellular pathology especially, in spite of all former battles and present attacks, will form the basis of every experimental and therapeutic observation, though some of the views concerning it may undergo modification through the progress of science, and opinions which Virchow himself could not accept may be brought forward again. The scientific question which appeared as a result of cellular pathology is the question of the cause and symptomatology of disease. Nothing can be more suitable in treating this question than to quote Virchow's own words: "An elementary pathological process in the sense of cellular pathology appears thus: an external influence acts upon a living cell and alters it in a mechanical or chemical way. The external influence is the causa externa, or as we simply express it, *the cause of disease:* the altered condition is called passio, disease. If now, in consequence of the change undergone, an action (actio s. reactio) takes place in the living cell, this change is called a *state or irritation* (irritamentum), and the cause of disease irritans. If, on the other hand, no action ensues, if the condition is limited to the change "suffered" by the cell, we have to do with a mere disturbance (laesio) or *paralysis*. Since, however, the same cause can evoke irritation in one cell, merely a disturbance in another, and even paralysis in a third, we assume a certain difference of the internal arrangement to be the cause of this varying behaviour. Thus we come to the internal cause or predisposition." But these words spoken in 1880 must be modified according to present experience. According to Virchow the causa externa is the cause of disease. The irritant acting upon the organism is in all circumstances the morbific factor according to this assumption. We do not wish to play with words. If, indeed, this foreign intruding agent produces a destruction of the cell power or a morbid modification of it, it obviously must be regarded as the actual cause of disease. But when, for instance, we see that the invading body produces only an entirely local irritation, or, although capable of reproduction as is the case with bacteria, no proliferation occurs, it becomes difficult to consider the same factor as the cause of disease in all instances. Virchow terms this phenomenon of indolence of the cell towards the intruder a want of predisposition; according to the school of bacteriologists, however, the cell is not a culture medium in the given case. We see from this explanation that Virchow himself assumes the cell power to be variable and we can quite logically and correctly say that by the term disease—i.e., nosos—is designated that condition in which the external irritation can accomplish the defeat of the cell.

Von Hansemann has shown from a pathological and

anatomical point of view that in cases of diabetes mellitus and other diseases the tubercle bacillus involves secondarily the lung. Von Hansemann calls this disposition, but we must certainly first of all term it nosos, since it is a question of proved deviation from the normal. This can also be illustrated by experiments. In a frog anthrax bacteria do not proliferate. As soon, however, as we place the animal in an incubator—i.e., weaken the cell power by heat—we are able to make the animal susceptible to the inoculation of anthrax. In this case the parasite is only a parasite of the diseased cell and this kind of infection I have termed nosoparasiticism. Thus we must describe as "nosos" the molecular change which we can no more observe through the microscope than we can the course of a chemical reaction, the outcome of which we judge only by the result. The cell is subject to the same vital fluctuations as Brown has assumed for the organism. The Brownonian theory has had no special value for practice, it is true, because at that time it was impossible to base a system of therapeutics on these observations so as to be of practical use. But it must be acknowledged that his theoretical deductions can be applied to the vitality of the cell. This theoretical explanation is, in all circumstances, of decisive importance for therapeutics and already physicians are beginning to direct attention to this view in the study of therapeutics. Thus, A. Menzer says: "The solution I have attempted to give to the question of the etiology of acute articular rheumatism is derived from the theory of a correctly interpreted nosoparasiticism." This question has grown to be of special importance for pulmonary phthisis. We cannot here enter into the subject of infection by tubercle bacilli; only one thing is certain—namely, that the bacillus is destroyed if the cells become healthy and only does harm when the cells are diseased. Even before the discovery of the tubercle bacillus this fact was proved by dietetic and open-air cures, as described in the excellent work of the two Dr. Williams, father and son, and Freund, again, has shown lately that the functions of the tissue of the lungs are impaired by abnormal immobilisation of the first rib and that then the tubercle bacillus can begin its work.

At the present day pharmacodynamics teaches that there are indeed drugs which do not merely act specifically upon a tissue as phosphorus acts upon the formation of bone, but that there are also cell excitants, such as cantharidin, which, without themselves having any effect on the bacteria, can bring about the cure of diseased tissues, so that the nosoparasitic bacilli are destroyed. But here begins a branch of science which, like the theory of immunity and serum therapy, occupied the end of the nineteenth century, and the waves of discussion still run so high that it is as yet unsuitable for a historical survey. Let it be said that these investigations of the present century afford us a guarantee that we are following the road of progress in therapeutics.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.
DELIVERED AT THE
MEDICAL SCHOOLS
AT THE
Opening of the Session 1904–05.

VICTORIA UNIVERSITY OF MANCHESTER.

INTRODUCTORY ADDRESS BY WILLIAM STIRLING, M.D., LL.D., PROFESSOR OF PHYSIOLOGY AND HISTOLOGY, DEAN OF THE FACULTY OF MEDICINE, VICTORIA UNIVERSITY OF MANCHESTER.

IN opening the course of physiology Professor Stirling gave an address on Salerno, the Oldest Home of Medicine in Mediæval Europe. Although in the time of Horace Salerno was famous as a health resort and in mediæval times it was honoured as the "Civitas Hippocratica," its origin as a school of medicine was unknown. It reached its high-water mark of fame from 1000 to 1200 A.D. and thanks to the discovery of the famous Herbarius manuscript in Breslau by Professor Henschel in 1837 and to other more recently discovered manuscripts and also to the "Collectio Salernitana" of S. Renzi and the later discoveries of P. Giacosa a great deal was now known of those who taught, and what they taught, in the oldest school in Christian Europe in which medicine was "taught, professed, and practised." Whether it owed its origin to clerical or secular influences it was in its best days a lay institution. Thus early had medicine in Salerno freed itself from the influence of the clerics. The policy of the Lateran prevented Italy from becoming a united kingdom under the Lombards and thus left Southern Italy an easy conquest to those virile warrior Normans, the sons of Tancred de Hauteville, who had conquered Apulia before the middle of the eleventh century. Robert Guiscard "the Wily" in 1060 "obtained amongst his new possessions the science of Salerno" and he did all he could to foster the prosperity of his capital. His successors, especially Roger the Great Count of Sicily, and Roger II., conferred many privileges on the city and the latter framed a code of laws regulating the practice of medicine. These laws took a more definite form under the autocratic Frederick II. in the thirteenth century who forbade the practice of medicine in his dominions without a Royal licence given after examination in the King's Court by the Masters of Salerno. The Masters of Salerno conferred the degree. Thus Frederick guarded carefully against any interference by the Church and made himself the source of all real power. In this regard the Faculty of Salerno differed greatly from the faculties of medicine of Bologna and Paris. About 1140 the first State examinations for a licence to practise medicine were instituted. The candidates had to follow a prescribed course of study, the object being to protect the laity from the dangers incurred through the ignorance and inexperience of the physicians. Frederick II. was indeed a great law-giver and spoke of himself as "law animate upon earth." The student had to give his attention for three years to logic and after these three years he had to study medicine for five years, and if he wished to be a surgeon he had to spend an additional year in studying the anatomy of the human body and thoroughly to be experienced in the way in which operations were successfully performed and healing was brought about afterwards. To this end Frederick commanded that a human body should be dissected once in five years. Previously to his time students had to be content with the anatomy of the pig as set forth in the work of Copho the younger. One of the years of study had to be passed under an experienced physician. Perhaps this represented the period of clinical instruction—something corresponding to an apprenticeship—the scholar accompanying the physician on his daily rounds. Frederick also made important ordinances for the preservation of the public health. He ordained that graves should be dug a certain depth, that hides and carcasses of dead animals must be thrown into the sea or into a river at least a quarter of a mile from a town, and that slaughter-houses must be erected outside the city walls. His laws relating to druggists and apothecaries were specially stringent both as regards the price of drugs and their adulteration which seems to have been prevalent even in those days. Even the number of the physician's visits and the payment per visit were regulated. After graduating—i.e., after laying his hand on the closed and then the open book and his betrothal to medicine by the ring—the graduate was crowned with laurel and dismissed with a kiss of peace. Frederick also took care that every applicant should be a "loyal" subject. The term "magister" was the earliest title used and the first mention of "doctor in physica" Renzi found to be in 1200 A.D.

Not the least remarkable of Salerno's claim to honour is that she admitted the fair sex to study in her school and granted to them after due examination the title of magister or doctor of medicine. The Breslau Codex makes it plain that the famous Trotula or Tortula—probably the wife of Joannes Platearius, the prior or præpositus of the school—wrote extensively not only on gynæcology and allied subjects but also on many diseases not directly connected with this subject. Many articles by her are given in the famous second article of the Breslau Codex entitled "Tractus de Ægritudinum Curatione," which belongs to the latter part of the twelfth century and is the first encyclopædia of medicine dealing with all subjects save surgery. Not the least interesting of the tractates in this codex is that of Archimathæus (1100), "De Adventu Medici ad Ægrotidium Libellus." The ethical code therein laid down would hardly in all respects meet with the approval of the Royal Colleges of Physicians of to-day but it throws a remarkable light on the status and practice of the profession at that time.

The description of the phenomena of diseases, their treatment, and the materia medica bulk largely in the literary productions of Salerno. The "Antidotarium of Nicolaus Præpositus" (1100), even to the second half of the fifteenth century, formed the basis of the legal Codex Medicamentarius of Southern Italy and with the writings of Matthew Platearius and the "Circa instans" formed the quarry from which most of the subsequent pharmacopœias were constructed. The most famous and best known of the works issued from Salerno is the "Regimen Sanitatis Salernitanum," dedicated about 1100 to Robert "Rex Anglorum"—i.e., to Robert who did not become King of the English. Over 200 editions of this work, which has been translated into all learned languages, are known, the last English edition being that of Dr. Ordronaux in 1871, and the one previously to it that of Sir A. Croke in 1830. The first printed edition was published in Montpellier in 1480. It is written in rhymed Latin hexameters and deals with the six non-naturals of Galenic medicine—viz., air, food, exercise, sleep, excretions, and the passions.

The fame of Salerno as a medical school was established long before that of either Paris or Bologna and more than half a century before Irnerius taught in Bologna. Perhaps the persistence in the use of the Greek language in Southern Italy was no inconsiderable factor in conserving the Greek traditions of the medicine of Hippocrates and Galen. The southern parts of Italy were in constant communication with Constantinople which before its fall was the centre of Greek culture. Græco-Latin civilisation was not extinguished in Southern Italy with the fall of the Roman empire. Even to the thirteenth century Salerno shone amidst the darkness of science "as does the firefly on a night in summer." It is recorded that even in the ninth century there were famous Salernitan physicians, while later bishops, nobles, and warriors travelled from afar to profit by the skill of its medical men and it was described as "Urbs antiqua, celebrata per orbem."

The decay of Salerno as a medical school set in at the end of the twelfth century, when the city was taken and sacked by Henry VI., when its teachers were scattered, and though revived by Frederick II. its fate was sealed. Even Ægidius Corboliensis late in the twelfth and early in the thirteenth century records its decay from its high estate—a condition of affairs hastened by the establishment of other schools of medicine, such as those of Bologna, Montpellier, and Paris, and also by the inroads of Arabic doctrines. Lingering on, "unhonoured and unsung," it received its *coup de grâce* on Nov. 29th, 1811, by an edict of Napoleon. Thus was extinguished by decree this famous home of medical study and science. Salerno kept the torch of learning brightly burning for several centuries, transmitted Græco-Latin works from the East to the West, introduced many drugs used by the Arabians, and set an example to all future universities in the liberality of its teaching—opening its portals to Jew and Gentile alike, to men and women of every creed and race who chose to avail themselves of its privileges.

INTRODUCTORY ADDRESS BY J. LORRAIN SMITH, M.A., M.D. EDIN., PROFESSOR OF PATHOLOGY AT THE UNIVERSITY.

Professor Lorrain Smith said: The decision which has recently been taken by the university to divide the department of pathology into two sections has been the direct result of the rapid growth of the subject in recent years. For a considerable period the department in this school has taken a leading place in bringing about the expansion of pathology, especially in its applications to public health, and under the new arrangements Professor S. Delépine will continue his work in a department devoted to bacteriology and comparative pathology. To him will fall the duty of teaching students of public health and he will at the same time be provided with the means of applying bacteriological methods of investigation to the problems which arise in public sanitary administration in Manchester and its neighbourhood. In the department the direction of which has been entrusted to my care, the student will receive instruction in general pathology and morbid anatomy. A knowledge of the pathological changes in the human subject of disease retains all its importance for the student who intends to practise medicine and this occasion affords a fitting opportunity for the consideration of pathology in relation to cognate subjects in the medical curriculum. In studying pathology the student finds himself in the same field as the clinician. The same subject is studied—but from a different point of view. The clinician studies the signs of disease and the mode of treatment with the purpose of discovering and applying the cure. When the study is carried a stage further and the methods of physical science are applied to discover the nature of the changes in function and structure in the diseased tissues and organs the investigation becomes pathological.

The ultimate unity of pathology and clinical medicine is clear, however, and it is futile to attempt to divorce them from each other. The pathologist must in due measure be familiar with clinical medicine and the clinician must keep in his mind's eye the guiding light of pathological research. Pathology is ultimately an experimental science, but the study of disease must in the first instance pass through a preliminary stage in which the facts regarding its occurrence and form are merely observed. At this stage it is investigated in the hospital ward and in the post-mortem room. When sufficient knowledge has accumulated to give some clue to the cause of the disease the investigation is transferred to the laboratory. In the laboratory pathology is studied as a biological science. The facts and methods which the student has learnt in the earlier years of his course are applied to new problems but no new tissue is found in pathological structures that is not present in the normal body. No new chemical process is seen that has not been already exemplified in normal metabolism. In the laboratory where the conditions are under our control it is possible to study the obscure but all-important first stages of the process of disease. It is in this way that pathology progresses as a science and in order to master the subject a student must pass through a course of study which gives him the means of following the development of the science in all its stages. Pathology must be studied both in the hospital and in the laboratory.

Among the recent developments of pathology which call for the student's attention one of the most striking is that of clinical pathology. This branch of pathology comprises observations on cases of disease, in the making of which the observer requires familiarity with laboratory methods and appliances. The best example is the clinical pathology of the blood. The blood is studied by chemical and microscopical methods in relation to almost every form of disease. We may learn, for example, not only the presence of bacterial infection in the circulation or in the tissues but also the degree of resistance which is offered to the invasion. We may further find in these phenomena the clue to the principles of treatment. Again, the study of malaria and allied conditions resolves itself into a microscopical study of the blood. Similarly the large group of diseases affecting the constituents of the blood is studied by the methods of clinical pathology. This branch of the science is daily increasing in importance and requires the most earnest attention of the student. It is most appropriately studied in relation to cases in the hospital wards.

When we turn to the study of pathology as a natural science we have to consider its relation to the sciences with which the student has become acquainted in the earlier years of his course. During the period in which a student is working at these sciences he ought to be forming in his mind the standards according to which his life work is to be carried out, but it is the unfortunate experience of teachers to find that often relatively little permanent benefit has been derived from this early discipline. This results from the hurried way in which the subjects are taken up and dismissed one after the other. When the inevitable examination is passed the knowledge which a student has acquired is often rapidly lost and there is too little result for the amount of work done. The present curriculum is crowded with disjointed subjects. Some process of conservation is required to prevent the dilapidation of knowledge. It was formerly the custom of examining boards to examine the student when he came up for his degree in the earlier as well as in the later subjects of the curriculum. This mode of conserving the student's knowledge has become impossible but no means have yet been discovered to effect the purpose of this old regulation. The study of pathology as an experimental science in the final period of the medical curriculum to a certain extent prevents the educational waste to which I have referred. In the recent study of immunity under the guidance of Ehrlich, of the pathology of inflammation as it has been taken up by Metchnikoff, and of cancer as it has been explained by Farmer, we find ready illustrations of the way in which pathology keeps alive in the student's mind the

physiological, biological, and botanical knowledge which he has already acquired. The study of pathology might become more valuable in this respect were it possible to teach the student the subject by introducing him directly to research. It is difficult to see how this could be done with the average student. He has neither the time nor the experience required for profitable work at research. Students who take special courses and post-graduate students do find it possible, and it is to them of inestimable value. The case of the average student is to some extent met by practical teaching. This is, however, only a partial solution of the difficulty. Practical teaching lacks the stimulus to spontaneous observation which is characteristic of research nor does it provide the same incentive to conserve and to use the knowledge derived from cognate sciences. The impulse to pathological research arises not only from the intellectual desire to pursue the scientific investigation of the subject but also from the practical demand for the means to break the power of disease.

The student who masters pathology in all its aspects and who is able to apply all the learning of the schools in his daily work of preventing the ravages of disease will often wonder that knowledge so important and so desirable is so difficult to attain. Our immediate perceptions do not carry us very far; but to investigate the facts and processes which lie beyond the reach of our immediate senses we can apply the experimental method. Patient investigation by this method gradually adds to the sum of our knowledge. There is no ground for pessimism. We must pass through the earlier stages before we reach the later ones. Many of the conclusions to which we have now come may require to be modified, but further progress is possible only because we have already reached the present stage. We cannot adopt the views of the distinguished president of the British Association for the Advancement of Science who remarked in his opening address that "the beliefs of all mankind about its material surroundings are not only imperfect but fundamentally wrong." Still more depressing is his explanation of this circumstance. "Presumably, however, this is either because too direct a vision of physical reality was a hindrance and not a help in the struggle for existence, because falsehood was more useful than truth, or else because, with so imperfect a material as living tissue, no better results could be obtained." To discuss what is meant by "direct vision of physical reality" would involve us in metaphysics. It is sufficient to know that it is a method of knowledge which is denied to the scientific investigator. The far-reaching discoveries which occasioned Mr. Balfour's remarks do not differ from the former results and discoveries of physical science. They have been reached by the same methods as those applied in the earlier stages of the science and by these methods the progress of the science will still continue. The announcement of a far-reaching discovery in any of the natural sciences is hardly a fitting opportunity for proclaiming the defects of the scientific method. It remains rather for investigators to continue their work with a yet firmer assurance, persuaded that scientific knowledge does not suffer from defects which it is their duty to eliminate.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY MISS M. C. MURDOCH, L.R.C.P., L.R.C.S. EDIN.

IN welcoming the students Miss Murdoch said that they were wanted, that Medicine was ever in need of fresh brains and hands, and that if they worshipped her in spirit and in truth Medicine would amply repay them for any privations which they might endure in her service. They stepped to-day with ease into some of the finest laboratories in London and all the recent equipments of science, an inheritance undreamt of by the women of 40 years ago. They would have to face the great realities of life, especially at hospital; they would lose many illusions but gain many new truths. She referred to the great loss which the school would sustain in the resignation of Mr. Stanley Boyd as anatomy lecturer. He had been their lecturer and friend for 22 years and they parted with him with sincere regret and most grateful thanks. Continuing, Miss Murdoch said:—

I wish to give you a few practical hints to ease you along the thorny but happy path of a medical student's life. You need at least seven or eight hours' sleep. When you go to bed forget all the cares and worries of the day, read some light literature, and get your work off your mind for at least half an hour before bed-time. Use up odd moments for sleep during the day, get into the habit of sleeping while all sorts of noises are going on, because the world cannot be kept quiet every time you are tired. Have a cold or tepid bath every day. Visit your dentist twice a year. No medical student ought to suffer from a purely preventable disease like toothache. Your clothing should be warm but light. Three layers ought to suffice, each layer thicker in winter than in summer. Silk or a mixture of silk and wool is as good as flannel next the skin and not so irritable. Do not adopt any uncommon style of dress. Keep to the fashion of the day without devoting too much care and thought to it. The great unthinking world judges by external appearances and the whole body of medical women is condemned because a few are careless. Never buy your clothes in a shop or establishment where sweating goes on. We women are much too careless about this matter, but we must stand by our fellow women and see that they get fair play. Go and see Mrs. Lyttelton's play *Warp and Woof*, where the overworking and long hours in dressmakers' establishments are shown up. Do not lay up for yourselves treasures of indigestion and physical deterioration by being careless about your food. I should like to see a large and ample refectory built at the Royal Free Hospital such as exists in most of the men's colleges in London and the provinces. Eat good, easily digested food at regular hours. England is beginning to learn that her future greatness lies in the kitchen and she is beginning to learn how to cook. Let milk, eggs, fruit, and vegetables enter largely into your diet. The heavy meal of the day ought to come in the evening when you have time to rest after it. Let me beg you never to sit in close, stuffy rooms; have your windows open always, night and day. When practicable, have your meals in the open air. When you are in the country go without a hat; expose your head and hair to the sunshine and the wind, and both will grow stronger. Have your muscles in good order; exercise freely in the open air. Join all the athletic clubs in connexion with the school, play tennis, hockey, and golf, cycle, ride, skate, and walk. Try not to stoop while you are reading; breathe deeply always and you will find that it rests your spine to sit up straight.

An ideal day would consist of eight hours' study; eight hours' sleep, and eight hours' play, but here, I am afraid, it means nine or ten hours' study and six or seven hours' play. Read with a friend when you can. If possible do not study by gas or electric light, but have a nicely trimmed kerosene lamp. Read big books, read widely—do not trouble with cram books; you are here to read for your life-purpose and not for examination only.

Let me preach to you the "Gospel of Relaxation," as Professor James of Harvard University calls it. We suffer much from Americanitis, a straining of every nerve to race for the best place. The cure is to relax. Do not keep that worried look on your face; if you relax the muscles that cause it your mind will at once feel more peaceful. When you have a holiday lay aside your medical books entirely, lie down on the heather or the bracken, let those elastic beds support you, and become at one with the drowsy, humming nature around you.

Do not be that monstrosity, a narrow-minded doctor. London is a storehouse of mental food and you must take advantage of it. If you love pictures you have only to choose your gallery; the best musical and the best dramatic art is to be had in London. If you love old china, old furniture, curios of any sort, look them out at the British Museum, the Wallace Collection, or the South Kensington Museum. Acquire some of your own and study them. Find out the historical spots, ride on the omnibuses and electric trams and know your London. Go out into the world, be in it and of it, keeping your head steady and clear in the midst of much illusion and delusion.

In speaking of friendship I would urge you to realise and not to idealise your friends. They are very human, just like you, and do realise that there is no such thing as a perfect friend, and so save yourself many heart-burnings and disappointments. Buy a good daily paper and read it. Interest yourselves in what women are doing all the world over. Read your "Englishwoman's Year-book"—note how women inspect factories and ameliorate the lot of the workers by enforcing the laws, how they lecture all over

the country on political, ethical, and other subjects, how they are ministers and lawyers in the United States of America and foreign countries, although not in England. Join a suffrage society and realise that when men and women coöperate in the work of a nation that nation really succeeds. Join the debating society and speak often at the meetings. Avoid having your mental balance upset by a spirit of pessimism that there is in the air. Yet I would not have you optimistic; let us see our faults and mend them; choose the via media. Hear a good lecture or sermon every Sunday but carry your Sunday spirit into every day of the week. I need not warn women students against alcohol; it is not one of their sins, but your bodily and mental vigour will be at a much higher level if you abstain entirely. Realise your responsibility in life, avoid the light and irresponsible word which is remembered and comes back years afterwards. When you come into your kingdom—i.e., when you graduate—do not abuse or misuse your authority. Your degree has been given you not to make you think you are superior but to make you always courteous and ready to help others. What is known as "side" is out of place here, whether it be "side" of intellect, of birth, or of money. Try to control not only words and deeds but your thoughts. When an unworthy thought comes into your head try to replace it at once by a good one. Do not worry about other people's thoughts, you will have enough to do to control your own. In conclusion I shall wish you a healthy mind in a healthy body, and those of you who know what perfect health is will understand that my wish for you is the *summum bonum* of every life.

A CASE OF GIGANTIC RENAL CALCULUS,

ILLUSTRATED WITH REMARKS ON CASES WHERE RENAL STONES FORM OBVIOUS TUMOURS.[1]

BY A. MARMADUKE SHEILD, M.B., B.C. CANTAB., F.R.C.S. ENG.,

SURGEON TO ST. GEORGE'S HOSPITAL, ETC.

THE subject of this communication may be well introduced by my briefly relating the details of a case which I believe is unique in the history of surgery.

An omnibus conductor, aged 39 years, was admitted into St. George's Hospital on Feb. 15th, 1904. He was a stout, muscular man, with no appearance of ill health, but was suffering from severe pain in the abdomen and becoming rapidly worse, with signs of collapse. He was under the care of Dr. H. D. Rolleston. The following history was obtained. In 1890 the patient had his first attack of hæmaturia and pain in the left loin. Several attacks occurred subsequently but did not at any time cause him to lie up. In November, 1903, he was admitted into St. George's Hospital under Dr. Rolleston for a further attack of hæmaturia of seven days' duration. There was then pain in the left loin, but the kidney could not be felt, the patient being somewhat stout; the urine was acid and contained blood and pus. The symptoms entirely passed away and it was decided to await more urgent symptoms before operating. The patient improved and was discharged after being in hospital for 14 days. Early in January last the patient had a severe bout of pain and hæmaturia which laid him up for three weeks. On Feb. 10th a further attack commenced, obliging him to discontinue work: there was no hæmaturia, but he had great pain and discomfort in the left renal region; a swelling was then noticed for the first time. The temperature was 101° F. and the pulse was 104. Filling the left flank and loin was a large, rounded, firm swelling, very tender, not moving with respiration. The urine was acid and contained no albumin or blood. There was no leucocytosis. The diagnosis was very dubious, the opinions rather inclining to a large malignant tumour with intrarenal hæmorrhage.

Operation was performed on Feb. 19th. An incision, five inches in length, was made through the left semilunar line and on dividing the abdominal wall an abscess containing a quantity of pus and two small stones was immediately opened. There was localised peritonitis and one of the stones had escaped anteriorly. The kidney was greatly enlarged and firmly adherent to the surrounding parts. The colon was flattened and noticeably adherent anteriorly. There was a ragged hole in the lower and anterior aspect of the sac through which pus, urine, and small stones had escaped. An enormous stone, which was subsequently found to weigh more than a pound, was now felt and removed with some difficulty. The kidney was then gradually separated and its pedicle was tied. After its removal there were found two small stones in its substance. The wound was thoroughly irrigated with saline fluid and sponged as dry as possible; a large drainage-tube was inserted through a counter-opening in the loin and the anterior incision was closed. The whole of this great stone lay in the "shell" of renal substance under the dome of the diaphragm and protected by the ribs. The inferior part of the tumour, which alone could be felt, was composed of dilated renal calyces containing pus and urinous fluid. The difficulties of the operation were very great. Pus and urinous fluid were pouring from the diseased mass over the intestines and wound. The dilated shell of renal substance was rotten, lacerable, and intimately adherent to the parts round, especially to the intestine, so that it was extracted with the greatest difficulty. The pedicle was indistinguishable. The parts where the renal vessels ought to have entered were clamped and on cutting away the tissues the vessels were secured. They were ligatured *en masse* with strong, stout silk. The operation, though performed with all possible speed, lasted one hour and the patient at its termination was collapsed but to no serious extent.

The after-treatment consisted in saline and nutrient enemata, a small quantity of laudanum being used with the rectal injections. The bowels were opened on the second day and fluid nourishment was then given by the mouth. The temperature and pulse became practically normal. The only trouble in the after-treatment was the anterior wound which, of course, was long exposed to a flow of septic pus. It inflamed and suppurated in several places, but by dint of great care on the part of the house surgeon and dressers this complication was successfully overcome. The patient is now back at work and in good health.

This great stone, when weighed fresh by the museum attendant and soaked in blood and fluid, with sand and detritus, was declared by him to weigh 19 ounces. When weighed dry with critical care on chemical scales some weeks after removal it weighed exactly one pound and half an ounce. Its measurements are as follows: long diameter, five and a half inches; circumference at the largest part, about ten inches (see illustration). A large facet is present where the stone lay against the vertebræ. The composition is probably oxalate and phosphatic, but I deferred cutting the calculus until it had been exhibited. A quantity of sand and small gravel-stones were lost in the operation. It will be seen that portions of the stone are broken away, so that the weight above stated is really a little below the mark. Obvious comments on this very striking case are the slightness of the symptoms, and it is significant that the man was able to do his work as an omnibus conductor until a short time before admission. His vehicle plied in the Gray's Inn-road which is not celebrated for its smoothness!

Every practical surgeon well knows how protean are the signs and symptoms of renal calculus. It has happened to all operating surgeons to meet with cases where pain and hæmaturia were present in a marked degree and to cut into the kidney with the confidence that a stone would be found, but they have been deceived. Again, some of the most agonising and severe symptoms are associated with small rough calculi not larger than an almond or a hazel nut, while the novice may be surprised on operating upon a case when the symptoms are but slight to be confronted with a stone of portentous dimensions, the size and presence of which were far from being previously realised. The curious nerve pains, the attacks of sickness, and all the other phenomena attending renal stone have been amplified and written about by authors and it would only be wearying for me to repeat them here. A word may perhaps be introduced, however, regarding the utility of the x rays as a means of diagnosis. I think there can be no doubt but that the efficacy of the Roentgen rays in the diagnosis of these cases depends a good deal on the skill and experience of those who apply the method. It has twice occurred to me to see the shadow of a stone depicted by one performer where another had failed, and there are doubtless minutiæ connected with the process which call for great technical skill and long experience. Given, however, the presence of typical symptoms are we certainly to conclude that no stone

[1] A paper read before the Medical Society of London on Oct. 10th 1904.

is present because no shade of it appears in the skiagram! I think the answer is in the negative. The conclusion seems to be that the skiagram when positive is of great value; when negative, not absolutely to be relied upon.

A case which will illustrate these remarks is as follows. In November, 1903, I treated a woman of middle age whose symptoms were entirely vesical. She had pus in the urine, intense irritability, and frequency of micturition; the urine was also alkaline. Four years before she had passed several small calculi. Careful examination of the bladder with sound and cystoscope revealed no stone. The renal regions were subjected to the x rays and the result was negative. The right kidney was, however, moveable and certainly enlarged to palpation bimanually. It was explored through the loin and a large oxalate calculus was found and removed.

The subject I wish to bring before the society this evening is one which I venture to think has not received the notice it ought. I do not believe it is generally known and appreciated that renal stones, when of great size or when very numerous, may form an abdominal tumour of notable size, the nature of which is very apt to be misunderstood. My attention was first drawn to this point by a case which occurred at St. George's Hospital many years ago. An old woman was dying from carcinoma of the breast, a recurrence of growth after a mammary operation. She had agonising pain in the back and a large hard mass could be felt to the right and in front of the spine by palpation through her emaciated abdomen. The natural diagnosis was made of recurrent cancer of the spine. But when she died the supposed tumour was composed of a dilated kidney stuffed with a number of large oxalate stones. Authors generally are silent on those very interesting, rare, but important cases. Morris in his Hunterian lectures relates an instance which has a bearing on the subject. The patient was a man. A hard "bony" tumour filled the right side of the abdomen. It had been considered to be hepatic cancer. On exploration the tumour was found to be renal and a calculous mass weighing ten ounces was removed. The kidney bled so freely that it had to be removed, but the patient sank. This man had "gone on" for 16 years without important symptoms.

I must also refer to the remarkable and enormous renal calculus in the museum of St. Bartholomew's Hospital which must be seen to be appreciated: a composite stalactitic mass on a central stem or core which weighs no less than 36¾ ounces—over two pounds. The second stone, weighing nine and three-quarter ounces, from the opposite or left kidney, is also shown. There were hundreds of smaller calculi and much sand and débris. These extraordinary formations were removed from the body of a man, aged 38 years, who died in the hospital suddenly. It is interesting to observe that an abdominal tumour was detected during life which, as in my case, reached from the costal margin to Poupart's ligament. Yet Dr. S. J. Gee, who has carefully related this remarkable case, states that the urine was natural in quantity. The kidneys are preserved and are seen to be extensively disorganised. Reference is made to Eurale's writings and he states that Pohl removed a stone weighing five pounds from the body of a princess. But I am not aware that the statement has been verified.[2]

Showing size of stone.

A striking case which occurred in my practice some years ago is as follows. An emaciated, rather fragile woman was seen at the Hospital for Children and Women, Waterloo-road, in March, 1899. She was married but had no children; she had been ailing for six months and pus was found in the urine. The tumour was found almost by accident. It reached from under the ribs to the ilium below and beyond the middle line in front. The colon was in front of it. It was obviously very fixed and not painful. It was very hard and irregular and felt exactly like a hard lobulated tumour

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lvii., 1881. St. Bartholomew's Hospital Museum, xxviii., No. 2349 and Catalogue of Calculi.

growth. The urine had on several occasions contained blood. It was now clear and acid. At the operation the colon and some small intestine were found flattened in front of the tumour and adherent to it. Some enormous veins occupied the capsule. The tumour was hard with irregular bosses upon it. Towards the spine it seemed to blend into the tissues. I was on the point of believing it to be sarcomatous and not removeable. When I introduced an exploring syringe at several points pus was withdrawn and I plainly felt the needle grate against a large calculus. I determined, therefore, to proceed with removal though I knew the case was of a desperate nature. I incised the capsule and dissected away the colon. In doing this the gut was nearly opened in one place. I then stripped away the renal capsule with the fingers and gradually enucleated the growth. The difficulty was very great and there was profuse venous bleeding. At last separation was effected and now the peril of the proceeding was obvious—it was impossible to isolate the tumour towards the spine. An ill-defined mass of the size of the wrist was all that could be felt. I was much puzzled to know what to do. The aorta was not distinguishable from the mass and I could not make a neat and distinct pedicle behind it. I accordingly freely incised the kidney and let out a quantity of pus and stones into a receiver. This enabled the assistant to deliver it further and I encircled the renal substance close to the spine with a strong silk ligature and cut it away. I tightened the ligature with all my force on the collapsed tissue and the bleeding was quite arrested. I finally cut away the centre of the mass left beyond the ligature, saturated it with carbolic acid, and sewed the masses of capsule together like the stump of a hysterectomy. The patient was, of course, seriously collapsed. The operation was completed in 65 minutes from the first time of taking the anæsthetic. It was performed with all possible speed. The woman was desperately ill after the operation and hovered between life and death for three days. She was kept alive by free stimulation and by judicious feeding and owed her recovery largely to the care bestowed upon her by the resident officer Dr. Méchod. 14 days after operation a fluctuating swelling could be found in the operation area. The temperature was a little raised. I waited events and this collection, probably either blood or serum, became rapidly absorbed. This was one of the most desperate abdominal cases I have ever seen, and I feel sure that speed in operating was one of the factors of success. The patient made an excellent recovery and was quite well and strong two years after the operation, when I last saw her.

In remarking on the operation itself I may observe that the colon was so injured at one spot, its peritoneal coat being torn, that I invaginated an area of the gut with Lembert's sutures. I was also very apprehensive that I had lacerated the diaphragm above. The renal capsule was intimately adherent here and in tearing it away I believe my fingers penetrated the thorax. I accordingly tamponaded this region with gauze and brought out the end of the gauze anteriorly. The strip was removed in 24 hours. These complications, as well as the extreme difficulty of making a secure pedicle already described, speak eloquently of the dangers and extreme difficulties which are encountered in removing a large pyonephrosis which is intimately adherent to surrounding structures. The kidney in this case was completely disorganised, a huge lobulated sac, full of pus and calculi, and but little secreting substance remaining. The calculi were eight in number and of various sizes and shapes as seen in the specimens. There was also a quantity of "sand" and detritus. The composition of them was mainly oxalate of lime and mixed phosphates as a coating.

Before concluding a consideration may well be raised as to the best method of dealing with cases of large or multiple calculi when the kidney is much disorganised. The results of nephrolithotomy by the loin are not always encouraging in these cases. I have seen septic sinuses discharging pus and urine persistently remain in the loin and the shell of kidney has had subsequently to be removed in very disadvantageous circumstances. I am rather inclined to the belief that removal of the disorganised kidney and calculi by an anterior incision is the best method by which to deal with these cases. My personal experience has amply proved to me that these operations may be exceedingly difficult. The risk of lacerating intestines is very great and the isolation and securing of a satisfactory pedicle may be a matter of the utmost difficulty. So far as I have been able to ascertain the present exhibited calculus is the largest which has ever been removed successfully from the kidney of a living person and it affords a striking illustration of what desperate abdominal conditions may now be dealt with by the aid of surgery.

I am indebted to Mr. Harold S. Barwell for the following list of renal calculi of unusual size;—

Transactions of the Clinical Society, vol. xxvi., p. 24, 1893. Donald Day's case of nephrolithotomy. Female, aged 32 years. Weight (dry) 1351 grains (two ounces four drachms); recovery. There is no record of a stone of this size previously removed successfully. Jacobson's Manual: 652 grains and 473 grains (both fatal). Shepherd (of Montreal): four ounces seven drachms (fatal). Bennett May (in the Transactions of the Clinical Society): 473 grains (successful). Footner (Brit. Med. Jour., Jan. 9th, 1892): 922 grains (successful); composition chiefly phosphate of lime and phosphate of magnesium. Royal College of Surgeons Museum: Calculi, Series V., F. 11: Phosphate of lime calculus five inches long; weight, five and a half ounces. Removed by operation from a woman, aged 46 years. Referred to by Langley Browne in Brit. Med. Jour., vol. i., 1886, p. 821. Calculi, Series V., F. 12: Phosphatic calculus weighing five and a quarter ounces, removed at the necropsy from a man, aged 52 years. Hale White: Stone weighing 1560 grains from a dissecting-room subject, Transactions of the Pathological Society of London, vol. xxxvi., p. 276.

Cavendish-place, W.

A CASE OF FRACTURE-DISLOCATION OF THE CERVICAL VERTEBRÆ.

BY ERNEST RINGROSE, L.R.C.P. LOND., M.R.C.S. ENG.,
HONORARY SURGEON TO THE NEWARK HOSPITAL.

THE following case of fracture-dislocation of the neck which I venture to record is, I think, of considerable interest in showing that extensive and persistent injury of the lower cervical vertebræ may occur and produce only few and transient symptoms, the disproportion between the accident and the mischief produced thereby being the converse of what is usually found in these cases—viz., slight injury with serious and permanent symptoms. Moreover, this case shows that it was possible and excusable not to diagnose such a usually serious lesion as fracture-dislocation of the cervical vertebræ in the pre-Roentgen-ray days.

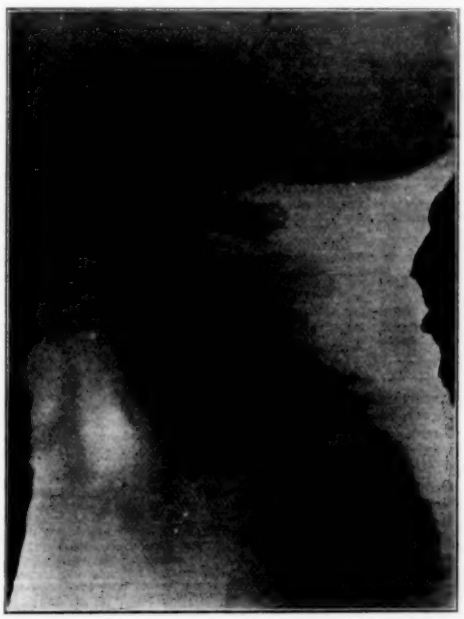
The patient, a boy, aged 14 years, was admitted into the Newark Hospital on the afternoon of June 28th, 1894. He stated that whilst diving into the river at the bathing place he collided with a man who was swimming by at the time. He was partially stunned but managed to reach the bank and was then taken out of the water by some friends and carried to the hospital. At the time, he never lost consciousness but felt "queer in his head."

On admission the patient complained of headache and pain at the lower part of his neck. He had not vomited. There was no loss of power or of sensation anywhere. The neck was rigid and slightly tender. There was no bruising and no deformity was to be seen. The scalp was normal. He was put to bed and his head and shoulders were carefully fixed with sandbags and a saline aperient was given. He had a fairly good night and in the morning said that he felt quite himself again. He was, however, unable to move his head except to a very limited extent, the side-to-side movement and extension being much more restricted than flexion. There were still considerable rigidity of the neck muscles and some tenderness. He refused to stay in the hospital for more than three days and returned home on July 1st, no further symptoms of any kind having developed. The diagnosis made at the time was slight cerebral concussion and strain of the muscles and tissues of the neck.

I saw the lad several times afterwards at his home and found that he was in the habit of holding his head with his right hand under the right side of the lower jaw when walking about, and he now tells me that he continued to hold his head steady in that manner for a period of six months. I lost sight of him for a long period but on seeing him again recently I found that he had joined the militia, having been passed as sound by the militia surgeon, and was up here for the annual training. He appeared to be a well set-up young man but I noticed that he carried his head rather stiffly, and being rather curious to know if any mischief could be detected by the aid of the Roentgen rays I persuaded him to be skiagraphed. An abnormal condition of the cervical vertebræ was detected by the screen and a

photograph was taken, for which I am indebted to Dr. A. Hamilton Lowe, the house surgeon.

A forward displacement has taken place in the lower cervical region, the centre of the body of the fifth cervical vertebra resting on the anterior superior edge of the body of the sixth. The bodies of the fifth and sixth vertebræ appear



Skiagram showing fracture-dislocation of cervical vertebræ.

small and wedge-shaped, the sixth more so than the fifth, the apex of the wedge being anterior. The body of the fourth vertebra is almost directly anterior to the fifth. The sixth and seventh cervical and first dorsal vertebræ are pushed backwards, while the cervical curve is greatly increased from the fifth vertebra upwards, the intervertebral spaces being considerably opened, a line drawn through the centre of the body of the fourth and one drawn through the centre of the body of the seventh forming an angle of about 100°. The altered shape of the bodies of the fifth and sixth vertebræ I conclude may be due partly to some crushing at the time of the accident and partly to the altered position and constant pressure acting for a period of ten years.

Newark.

PULSATING GANGRENE OF THE LUNG.

By JOHN LINDSAY STEVEN, M.D., F.F.P.S.GLASG.,

PHYSICIAN AND LECTURER ON CLINICAL MEDICINE, GLASGOW ROYAL INFIRMARY; MEMBER OF THE GENERAL MEDICAL COUNCIL, ETC.

PULSATING gangrene of the lung is a morbid condition of which I have not been able to find any description in the medical literature to which I have access and I have therefore determined to publish the notes of a case which occurred in my wards in the Glasgow Royal Infirmary in 1898. I also think the case worthy of record because it seems to me to assist towards the explanation of the pulsation in that somewhat rare but very well known affection, pulsating empyema. Under the name of "pulsating empyema of necessity" in 1844 Robert L. MacDonnell of Dublin was the first in this country to call attention to this interesting and rare condition.[1] He reported three cases, two of which were verified by post-mortem examination. In all of them pulsating tumours appeared on the left side of the chest, one in the cardiac region and the other two at the lower part of the left side. Dr. Chambers thus explains Dr. MacDonnell's use of the term.[2] "The latter was called by Dr. MacDonnell 'pulsating empyema of necessity,' as the term 'empyema of necessity' was always applied by the older writers to cases where the pus works its way outwards and forms a tumour." In a subsequent essay, however, Dr. MacDonnell abandoned the term. The next important contribution to the subject was the thesis of Dr. Jules Comby in 1881. "De l'Empyème Pulsatile," republished in an extended form in 1883.[3] Dr. Comby reports 27 cases in all, among them those of Dr. MacDonnell, and he enters into a full discussion of the symptoms and diagnosis of the affection. It is to be distinguished, according to the French physician, from "pneumonie pulsatile," "cancer pulsatile du poumon," and "anévrysme de l'aorte." In referring to pulsating cancer of the lung as a disease likely to be mistaken for empyema pulsans Dr. Comby is following Dr. MacDonnell; it is noteworthy, however, that Dr. MacDonnell apparently had never seen a case of the kind and his remarks on the subject are purely theoretical.

The contribution by Dr. Samuel West[4] in 1897 is important. "Empyema may pulsate," he says, "but distinct pulsation is certainly a very rare phenomenon. ..... The fact remains that distinct pulsation is very rare." Dr. Comby in 1883 gave notes of the published records of 27 cases; "Wilson in 1893 brings up the number of published cases to 68." The pulsation is of two kinds: (1) a general shock or intra-pleural pulsation; and (2) expansile pulsation or extra-pleural pulsation. Such is Dr. West's classification of the affection. He continues his paper by entering upon a discussion of the diagnosis of the two varieties and concludes it with observations upon the explanation of the phenomenon, pointing out that "there appear to be three different kinds of pulsation." I agree entirely with him in his remarks upon the "pulsating pneumonia" of Graves. "As to the existence even of pneumonia pulsans I am very sceptical," writes Dr. West, and I am quite at one with him. Graves's account of pulsating pneumonia—a common occurrence according to him—is to be found in his clinical lectures,[5] but few, I think, will now agree with the explanation he gives of the cause of the pulsation. I have already said that Dr. West's paper is an important contribution on this interesting clinical condition and it is therefore perhaps necessary to point out one or two bibliographical and typographical errors. Dr. Robert L. MacDonnell did not spell his name "Macdonald" and he did not publish his paper in "1854."[6] The title of Dr. Comby's paper in the *Archives Générales de Médecine*, 1883, vol. ii., was not "Thesis d'Empyème Pulsatile"[7] but "Les Pleurésies Pulsatiles (Empyème Pulsatile)," which was an expansion of his thesis entitled "De l'Empyème Pulsatile," published Dec. 30th, 1881. Such errors may seem trifling but they are apt to grow and I find that some of them have already reappeared in Dr. West's valuable treatise on "Diseases of the Lungs."

An important article on pulsatile empyema has also been written by Dieulafoy[8] in which he expresses his preference for the term "empyème pulsatile" rather than that of "pleurésie pulsatile" as adopted by Dr. Comby in his second monograph. He thinks the effusion in such cases is practically always purulent and that pulsating empyema always occurs on the left side. He supports his views by two cases of his own. I may finish these short historical notes by reference to the interesting paper of Dr. E. M. Light,[9] in which an account of three cases is given in careful detail. All had external swellings, two occurred in children, and in all the pulsation was "synchronous with the cardiac impulse and systolic in time." In this connexion it may be worthy of note that Dr. MacDonnell described the pulsation as "a strong diastolic pulsation."[10]

The case of pulsating gangrene of the lung now to be described is related to pulsating empyema merely by the clinical fact of pulsation. In the foregoing literary note

[1] Contributions to the Diagnosis of Empyema, with cases, Dublin Journal of Medical Science, 1844, vol. xxv., p. 1.

[2] Pulsating Empyema after Acute Pleuritis; a Swelling above the Left Nipple which Burst Spontaneously; Recovery, THE LANCET, May 31st, 1862, p. 573.

[3] Les Pleurésies Pulsatiles (Empyème Pulsatile), Archives Générales de Médecine, 1883, vol. ii., pp. 549, 689.

[4] Pulsating Empyema (Empyema Pulsans), Transactions of the Roy. Medical and Chirurgical Society, 1897, vol. lxxx., p. 239.

[5] New Sydenham Society's edition, London, 1884, vol. ii., p. 46-47.

[6] Loc. cit., p. 240 and p. 240 footnote.

[7] Loc. cit., p. 239 footnote.

[8] Manuel de Pathologie Interne, 1901, thirteenth edition tom. p. 531.

[9] Notes on Three Cases of Pulsating Empyema, THE LANCET, Sept. 26th, 1891, p. 704.

[10] Loc. cit., p. 4 et seq.

references are found to pulsating pneumonia and to pulsatile cancer of the lung; both of these conditions are, perhaps, more intimately related to the morbid state with which I am now dealing than pulsating empyema, but of neither of them can I find any detailed pathological or clinical account. In the present case the gangrene was verified post mortem and the intimate relationship of the large gangrenous cavity to the pericardium sufficiently explained the pulsation of the chest-wall at the left base posteriorly which was discovered during life.

Clinical report by the house physician, Mr. George Coats, M.B.—A woman, aged 37 years, was admitted to Ward 8 of the Glasgow Royal Infirmary on Nov. 28th, 1898, and died Dec. 16th, 1898. She complained of pain in the left side, cough and spit of about five days' duration. Two weeks previous to the onset of the above symptoms patient had an ordinary cold. On Nov. 24th she suddenly became worse and then complained of the severe pain in the left side which was aggravated by a long breath. For about four days previous to the onset of the pain she had complained of rigors and severe pain in the small of the back. On Nov. 24th she had a more severe rigor and after that the cough was much aggravated and began to be accompanied by a somewhat profuse spit, at first white, later somewhat brown and dark. She was seen first by her doctor on Nov. 24th and was then put on a diet of milk and soda water. With the exception of a little gruel and beef-tea she has continued the limited diet. She was not aware of any delirium but sleep at night had been only in snatches. The pain in the side was very troublesome when she coughed. The bowels were constipated and during the last three days there had been no motion.

Examined Nov. 28th, 1898. The patient lies easily in bed. The face is somewhat flushed and on the whole rather suggestive of acute pulmonary disease. The pupils are medium and active. The tongue is flabby and indented, clean at the edges but coated elsewhere with a creamy white fur. The respirations are shallow and number 32–34 per minute. The pulse is small and of fair tension, registering 100 per minute. The expectoration is not very characteristic of pneumonia, consisting of isolated rather nummular pellets of a slightly brownish tinge floating in frothy mucus. The cough is loose but restrained as if from desire to prevent pain. The decubitus is either dorsal or on the right side. The patient states that it is painful to lie on the left side.

Chest.—On inspection of the anterior aspect a slight degree of fulness is visible over the left front, from the level of the second space downwards, so that the intercostal spaces, which are well seen on the right side, are not visible on the left. Both to inspection and palpation the respiratory movement in the left front and axillary regions is slightly diminished. Percussion in front is everywhere resonant and no abnormality of the respiratory murmur is anywhere detected.

Posteriorly there is distinct comparative dulness over the whole left base from the level of the mid-scapular region downwards, but auscultatory phenomena are quite indefinite, the respiratory murmur being on the whole normal over the dull area and unaccompanied by râle.

The heart.—The apex beat is visible and palpable as a somewhat diffuse impulse in the fourth interspace, three inches to the left of the middle line. The cardiac area is not enlarged, the upper border corresponds to the fourth left interspace, the right border is in the middle line, and the left border two and a half inches to the left of the middle line. The first sound at the apex and indeed all over the cardiac area is sharp, abrupt, and somewhat slapping in character. At the base the second sound is well articulated, though not unduly loud. In the apex region a short superficial systolic murmur is occasionally heard and is carried towards the axilla and the pulmonic area but is not audible in the aortic area. There is no history of rheumatism, though she has occasionally suffered from rheumatic pains in the right shoulder.

Urine.—Specific gravity 1022, slightly acid, deep amber colour, no albumin, no sugar, a slight diminution of chlorides.

Note by Dr. Lindsay Steven.—The clinical history indicates on the whole an acute pneumonia, supervening upon a common cold. The physical signs are, however, quite indefinite with the exception of the dulness at the left base and the slightly rusty spit. The cardiac murmur is slightly variable in intensity and possesses a character which is rather suggestive of extracardial origin. The obliteration of the intercostal spaces on the left side may be due to voluntary fixation to avoid pain, though the possibility of pleural involvement must be kept in mind.

Dec. 1st, 1898 (Dr. Steven).—The general condition of the patient is perhaps a little improved, but the temperature shows a distinct tendency to a highly irregularly remittent type, in the 24 hours ranging between 99·2° and 102·8° F. 3. The pulse this morning numbers 82, the respirations 52. The physical signs have undergone no marked change except that at and about the lower angle of the left scapula pretty abundant coarse crackling râles both with inspiration and expiration are audible. It is thought possible that the condition of the first sound at the apex may indicate a mitral stenosis. The chief change in the case is the supervention of a highly offensive and somewhat gangrenous odour of the sputum, which likewise has changed from its brown colour to a dirty grey. The pain in the left side is not now complained of.

Dec. 2nd (Dr. Steven).—A notable feature in the case this morning is a marked diminution, if not complete absence, of the respiratory murmur in the left infra-clavicular region, contrasting strikingly with a somewhat exaggerated respiratory murmur, vesicular in quality, over the right infra-clavicular region. The apex beat is still in the same situation and the first sound presents similar characters. Occasionally at the level of the third left cartilage and over the apex a faint pleuro-pericardial friction is heard. The same comparative enfeeblement of respiratory murmur prevails over the whole left back and dulness is more absolute than before below the level of the angle of the left scapula. The râles are very scanty, none being audible in the dull area, although yesterday moist crackling râles with inspiration and expiration were heard in the axillary line in the dull area. The sputum is very distinctly fetid, although hardly gangrenous in odour, and at the time of this note a minute speck of blood is noted for the first time.

Dec. 6th (Dr. Steven).—The cough is now ver severe and frequent, apt to be paroxysmal. The fetor of the sputum is still pronounced. The general appearance is much deteriorated and during the last three or four nights profuse perspiration, necessitating change of dress, has occurred. The temperature is still irregularly remittent; maxima about 102°, minima about 99·4°. The pulse ranges between 80 and 90, the respirations between 20 and 30. There is still very marked dulness over the whole left base posteriorly, with great enfeeblement of the respiratory murmur, which is almost inaudible, though judged to be tubular in quality. Occasionally a crackle can be made out in the left infra-axillary region.

Dec. 13th (Dr. Steven).—Since the date of the last note a low type of fever of a somewhat continued character has been recorded, the base line of a four-hourly chart being situated at 100°, the maximum and minimum records during five consecutive days being 101° and 99° respectively and these only on two occasions. The pulse ranged between 85 and 100; the respirations about 30. During the last four days from two and a half to four ounces of expectoration have been expelled daily. Yesterday evening about 7 P.M. she became rather sick after taking creasote. The sickness brought on a paroxysm of coughing which ended in the expectoration of about one ounce of bright-red frothy blood, which this morning is found to be partially coagulated. The pulse to-day is small, regular in force and rhythm, and numbers about 90. The respirations are about 36 and not obviously laboured. The tongue is pale and coated with a yellowish white fur. The complexion is pallid and the face somewhat anxious-looking. The chest anteriorly shows perhaps a slight flattening in the right infra-clavicular region, but no diminution of movement. Percussion and auscultation over the lungs in front yield normal results. The respiratory murmur presents a healthy quality and is equal on both sides. Posteriorly, there is slight flattening and perhaps slightly defective movement at the left base. The vocal fremitus over the dull area is distinctly diminished. The dulness of the left base begins at the sixth dorsal spine, from which its upper margin slopes gently downwards and outwards, cutting the sixth rib in the mid-axillary line. Auscultation reveals a deficient respiratory murmur not obviously tubular over the whole dull area and scanty irregular râles. The fetor of the expectoration is also improved. The occurrence of the hæmoptysis in succession to the events noted in the foregoing report renders it pretty certain that a limited necrosis in the base of the left lung has followed the pneumonia.

Dec. 15th (Dr. Steven).—On examining the left base this morning it is noticed that the cardiac sounds are heard with great distinctness in the dull area and further that a very distinct cardiac impulse is felt in the same place.

Dec. 16th.—The patient died this evening about 7.30. The grave symptoms may be dated from Dec. 12th, when she first had hæmoptysis as noted in the entry of Dec. 13th. After the hæmoptysis the temperature rose to 103·4°, falling the next day at noon to 98°, only to rise again in the evening to 104·6°. During Dec. 13th she had hæmoptysis to the amount of 16 ounces. In the early morning of Dec. 14th she had a rather severe rigor, followed by a temperature of 105°, and in the evening the temperature was 104° after having touched 100° at noon. Since then the temperature has pursued a highly irregular remittent course but with on the whole a downward tendency. Hæmoptysis on Dec. 12th was five ounces; Dec. 15th, ten ounces; Dec. 16th, before her death, four ounces; latterly, however, there was only altered black blood, no bright red hæmorrhage. Respirations ranged between 30 and 40 and the pulse between 100 and 140. The fetor of the expectoration was very marked to the end and the cough was throughout troublesome. About noon of Dec. 16th a marked change for the worse took place in the patient's condition, the respirations becoming very much embarrassed, and the pulse beginning to fail. Free stimulation was resorted to, but in spite of this she sank and died. During the day there was considerable diarrhœa, the motions being very dark and tarry.

Dec. 18th, 1898. Post-mortem examination.—Well-nourished body. Rigor mortis moderately developed. Pupils dilated and slightly unequal, the left being rather the smaller. On exposing the peritoneal cavity the stomach is found to be considerably dilated and bent upon itself so that the greater curvature at its lower point is only four inches above the level of the symphysis. The pericardium contains about 12 ounces of clear serous fluid in which one or two loose gelatinous clots are suspended. The surface of both layers of the pericardium is smooth, there being no fibrinous exudation. The heart is small and rather pale. It weighs eight ounces. The mitral orifice has a circumference of 91 millimetres and the tricuspid 145 millimetres. The pulmonary and aortic orifices are quite competent and all the valvular curtains are quite normal in structure. The structure of the aortic arch is normal. The right lung is quite non-adherent and is voluminous. It is not intensely pigmented and its anterior margins are suggestive of very slight emphysema. The whole substance of the organ is very highly œdematous but otherwise the parenchyma shows nothing unusual. The bronchial mucous membrane is intensely hyperæmic in the larger and medium bronchi. On dealing with the left lung it is found to be firmly adherent posteriorly from apex to base. Projecting through the left aspect of the pericardium, to which the lung is firmly adherent, is seen a fluctuating swelling which is bounded below by the diaphragm and externally by the lower lobe of the adherent left lung. In order to permit of a more thorough investigation of this swelling the abdominal organs are removed before the lung and the swelling are removed. The liver is pale but healthy in appearance and weighs 52 ounces; the gall-bladder contains normal bile. The dilated stomach is opened along its lesser curvature. It contains a large quantity of brown fluid. The internal surface near the pylorus is covered with shreddy mucus, but the mucous membrane shows no abrasion. The fibres of the pyloric ring are well developed. Appearances are those of stomic distension with catarrh of mucous membrane and diapedetic hæmorrhage. The spleen is large and soft and its vessel walls contain yellow nodules like caseating miliary tubercles. The kidneys are slightly enlarged; the left weighs seven ounces as also the right. Their capsules slightly adherent with small cysts. With difficulty the left lung is removed and it is found that the pericardial swelling does not disappear in the process. The left lower lobe on dissection is found to be the seat of a large gangrenous cavity filled with necrosed lung tissue and blood, the cavity occupying almost the whole substance of the lobe. The pericardial swelling had been caused by the cavity bulging into the pericardium and it entirely disappeared when the lung was cut into. There was no lung tissue between the left wall of the pericardium and the pulmonary cavity, so that the pericardial wall formed the inner surface of the gangrenous excavation

in the adherent left lung. This anatomical condition is of interest in connexion with the distinct pulsation felt during life over the lower lobe behind and the clear transmission of the heart sounds in the same situation.

Such is the case as recorded in the ward journal. The post-mortem examination clearly proved that the pulsation was caused by the intimate relationship of the gangrenous lower lobe of the left lung to the left surface of the pericardial sac. It is also of interest that there was a distinct tumour-like projection inwards of the pericardial wall which would receive the systolic shock of the heart, and this was transmitted to the chest wall through the semi-fluid contents of the gangrenous cavity. There was no localised bulging of the chest wall, as in most of the cases of pulsating empyema—the bulging was internal into the pericardium. The pulsation was distinctly felt in the intercostal spaces of the left axilla and at the base behind and was of the same character as that felt over the apex beat of the heart. It was a distinct systolic pulse. Making use of West's classification it corresponded to his "intra-pleural pulsation," but it was, of course, intrapulmonic. This being so it might be suggested that the terms "intra-thoracic" and "extra-thoracic" might better describe the pulsation in the first instance until at least it is determined whether the disease is pleural or pulmonary in origin.

It is worthy of note also that the heart was neither hypertrophied nor fixed and that the left lung was everywhere so firmly adherent that it was removed with difficulty from the thoracic cavity. Applying the anatomical conditions found in the present case to the explanation of the cause of pulsating empyema they would seem to indicate that in order for an empyema to pulsate the pus-filled cavity must directly abut upon the pericardium and the adjoining lung must be firmly bound to the chest wall by adhesions. It is unnecessary apparently that the heart should either be hypertrophied, displaced, or fixed.

I am indebted to my pupil, Dr. D. Annabelle McGregor, for carefully extracting the notes of the case from the ward journal.

Glasgow.

A CASE OF BLOOD POISONING FROM TONSILLITIS:

COMPARATIVE RESULTS OBTAINED FROM TWO VARIETIES OF ANTISTREPTOCOCCIC SERUM AND FROM PERCHLORIDE OF IRON.

BY SIR ISAMBARD OWEN, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO ST. GEORGE'S HOSPITAL.

THE patient, a man, aged 22 years, was admitted to St. George's Hospital on Jan. 1st, 1904, suffering from a severe sore throat. The fauces were generally red and swollen; both tonsils were swollen and a patch of membrane was observed on the left tonsil. The anterior chain of cervical glands was swollen on both sides. The affection of the throat was said to have commenced on Dec. 24th, 1903. A swab was taken for bacteriological examination but neither diphtheritic organisms nor streptococci could be cultivated from it.

The patient was seen by me for the first time on the afternoon of Jan. 2nd. The temperature had risen to 103° F. on the previous night and had remained between 101° and 102° during the day. No membrane was then visible on the tonsils but the left tonsil exhibited the appearances of suppuration. The glands in the neck were still swollen. The patient was thin and pale and the eyes were surrounded by rings of dark colour. On examining the chest a few scattered rhonchi of high pitch were heard at the right apex. The second sound of the heart was reduplicated at the apex but nothing else abnormal was found by physical examination. I ordered the left tonsil to be lanced and a wash of listerine to be used. The condition of the throat thenceforward improved, the swelling and redness of the tonsils lessening and the swelling of the cervical glands diminishing. The temperature, however, continued to rise. The night temperature, nothwithstanding repeated sponging, reached 104·7° on the night of the 4th and about 103° on the succeeding nights. The patient grew weak, tremulous, and deaf, and began to wander in his mind. The rhonchi in the chest increased, the abdomen became distended and tympanitic, and the tongue became dry. On the 5th, suspecting enteric fever, I ordered a Widal's test to be made, but no agglutination took place. On the 6th the rhonchi disappeared. Some loose motions had been passed. The patient complained of pain in the right knee and shoulder. When examined by me in the afternoon the whole of the right arm was very tender to touch. The *left* knee had swollen and there was evidence of fluid effusion on the inner side of the joint and beneath the quadriceps extensor. The superficial veins over the joint were dilated. The patient was pale and he sweated profusely. I ordered a bacteriological examination of the blood for the presence of streptococci and asked my surgical colleague Mr. F. Jaffrey to see the patient with me. He advised no immediate operative measures. Lead and opium lotion was applied to the affected joints and the left knee was put upon a splint. By the 7th both the delirium and the sweating had increased. The swelling of the knee was rather less but the tongue was still dry and raw.

Dr. Harold R. D. Spitta, assistant bacteriologist to the hospital, having withdrawn 15 cubic centimetres of blood from the right median basilic vein, reported on Jan. 7th the presence of streptococci in the specimen. A further examination of the blood for Widal's reaction, made on the 8th, again proved negative. I now (Jan. 7th) commenced treatment by injection with antistreptococcic serum, employing at the outset the serum of the Lister Institute, and at the same time ordering a supply of Roux's serum to be obtained from Paris. The injections were made subcutaneously in the flank. Four injections of 20 cubic centimetres of the Lister Institute serum were made—one on the 7th, one on the 8th, and two on the 9th, but without any apparent result, the temperature continuing to reach or pass 103° every night, the pain in the right shoulder increasing, the tongue remaining dry and red, and the condition of the left knee persisting unchanged. On the 8th the apex beat of the heart was observed to be displaced into the nipple line and to have become diffused. The second pulmonary sound was accentuated. On the 10th I ordered the serum treatment to be discontinued, and, pending the arrival of the Roux's serum, prescribed a scruple of salicin to be taken every six hours. On the 12th I received a consignment of Roux's serum. The condition of the patient had then changed but little. The shoulder had become more painful and there was obvious swelling of the joint. Tubular breathing was heard over the left lung about the angle of the scapula. The apex beat of the heart had extended outside the nipple line and a "slapping" second sound was heard in the pulmonary area. Microscopic examination of the blood revealed nothing abnormal. Treatment by Roux's serum was carried on from the 12th to the 16th, eight subcutaneous injections of 20 cubic centimetres each being given in all—viz., one on the 12th, two each on the 13th, 14th, and 15th, and one on the 16th. The temperature sank steadily from the 13th to the 17th, the delirium disappeared, the shoulder became less painful, the tongue grew moist and less red, and the patient recovered his appetite, being able to take custard and jelly on the 15th and fish diet from the 16th. The pulse- and respiration-rates, however, remained unchanged. On the 16th two boils, three-quarters of an inch in diameter, appeared on the back of the left shoulder over the scapula and one of similar size on the left buttock. The serum treatment was thereupon omitted until the 18th. On the 18th no streptococci could be found in the blood, of which 15 cubic centimetres were again removed by Dr. Spitta from the median basilic vein. These organisms, however, were present in the urine. Treatment by Roux's serum was now recommenced, one injection of 20 cubic centimetres being given on the 18th and 19th, three on the 20th, and one each on the 21st, 22nd, and 23rd. The temperature rose to 100° on the evening of the 19th but was normal from the 20th to the 23rd. The boils during this time partly healed, that on the buttock being quite healed by the 25th, and the knee recovered, but pain persisted in the right arm, the grasp of the hand being very feeble. On the 24th the night temperature again rose slightly above normal. I recommenced the injections on the 26th, one being made each day from the 26th to Feb. 1st, two on Feb. 2nd, and one on the 3rd. During this period the pain in the right shoulder and arm continued to lessen and muscular power returned. The appetite slowly improved, the mental faculties were completely recovered, and the boils healed. But beyond a certain point the improvement did not go. The temperature continued slightly raised and the patient remained weak and "shaky." By the 2nd the right shoulder was free from pain but on the previous day pain and slight tenderness had appeared in the left thumb joint, and on the 2nd the left

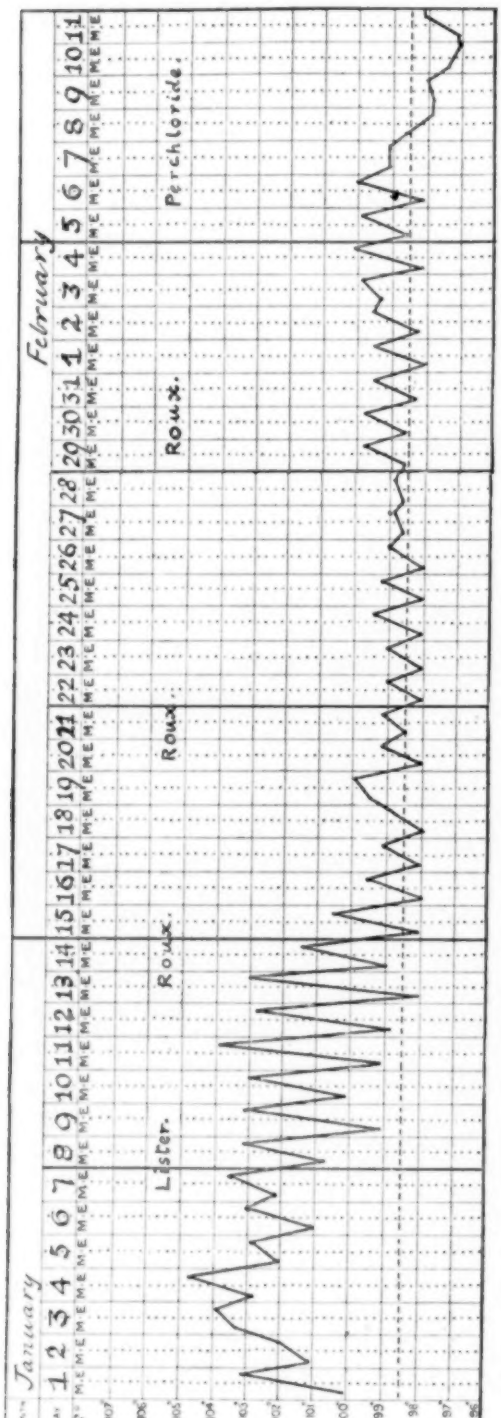


Chart showing the influence on the temperature of two sera and of perchloride of iron.

wrist was also painful and swollen and the dorsum of the left hand was puffed and œdematous. By the 4th the pain and swelling had partly quitted the left wrist and had appeared in the right, the dorsum of the right hand being now swollen. I now ordered the injections to be omitted and treated the patient with the mixture which I commonly use in cases of facial erysipelas—viz., 30 minims of tincture of perchloride of iron, with 25 minims of dilute hydrochloric acid and three grains of sulphate of quinine, to be taken every six hours. On the following day the pain and swelling of the joints had lessened. By the 7th both wrists had decidedly improved and the night temperature had not risen above 100°. 15 cubic centimetres of blood, taken by Dr. Spitta from the median basilic vein on the 6th, were again found sterile. On the 7th, the condition remaining unchanged, I increased the dose of the tincture to 35 minims. From the following day the temperature was subnormal and the joints were free from pain and swelling. On the 12th the patient was able to lie outside his bed and the mixture was discontinued; on the 13th he was up, though the apex beat of the heart was still slightly displaced to the left; and on the 25th he was able to go to the convalescent hospital. The pulse- and respiration-rates had not even then returned quite to normal.

I saw the patient when he returned from the convalescent hospital on April 18th. He was still pale and thin but he felt quite well and complained of no symptoms whatever except of some pain in the loins, which appeared to be due to a varicocele. The apex beat of the heart had returned to its normal situation though the second sound was still accentuated. The urine was normal. The glands under the angle of the right jaw were still slightly enlarged.

The occurrence of a general streptococcic infection following a suppurative tonsillitis which at the first appeared to be of an ordinary character is, though not unprecedented, sufficiently uncommon to be of interest. The treatment was commenced in this case by the use of a serum which, though a polyvalent serum, was of a less complex constitution as regarded its antitoxic elements than the Roux's serum obtained from Paris. The effect of injecting this serum was apparently *nil* but an almost immediate drop in the temperature, accompanied by a progressive diminution of the local symptoms and improvement in the general condition, followed the use of the Roux's preparation. That the sequence of events was not accidental will, I think, appear certain after inspection of the temperature chart. But even the use of the Paris serum did not destroy or neutralise the whole of the materies morbi, which was probably of a multiple nature. The residual morbid manifestations, however, disappeared rapidly when the treatment by full doses of perchloride of iron was commenced and again there seems good ground for attributing to the action of this drug the destruction of the residual toxic elements which were not destroyed or neutralised by the anti-serum.

Curzon-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON A CASE OF GUNSHOT WOUND.

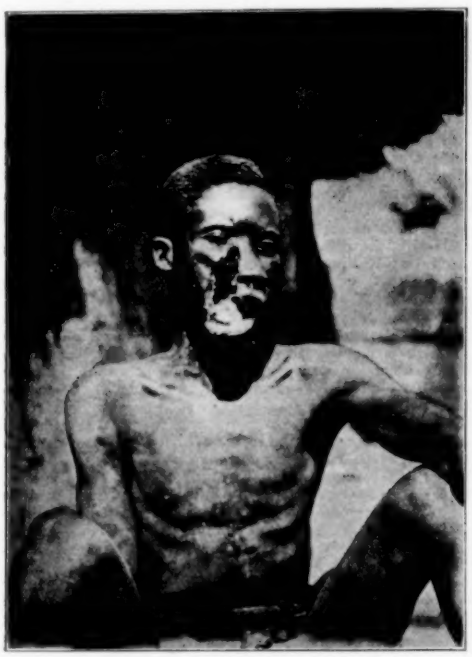
BY P. H. WARD, M.R.C.S. ENG., L.R.C.P. LOND.,
MEDICAL OFFICER TO THE AYRSHIRE GOLD MINE COMPANY, LOMAGUNDI, SOUTHERN RHODESIA.

IN THE LANCET of July 30th, 1904, p. 301, the Bishop of Zanzibar contributes a note on a case of cut-throat. He calls it "an example of the vital energies of primitive man when still unspoilt by modern civilisation." Perhaps the following may prove an interesting example also.

I had cycled some 20 miles to attend an inquest and was just contemplating a return home when I was asked to accompany the native commissioner to a kraal some distance away to see the body of a native reported shot, there being some doubt as to whether it was suicide or murder. We started at daybreak on the following day and reached the kraal at 2 P.M. There we found the boy alive. More than once in my experience a native has been reported dead when he is only "as good as dead" as my native orderly once told

me when I remonstrated with him for telling me a boy was dead and asking for permission to bury him when as a matter of fact the native was not dead and did not die for some hours.

The history of the accident was as follows. A native police boy accused this boy of having taken his wife away. The native denied it and the police boy left the hut, leaving his rifle (a Martini) inside the hut. The native promptly picked it up, put it to his chin, and pulled the trigger with his right toe. A woman inside the hut seeing what he was about to do placed her hand over the barrel, the bullet passing between two of her fingers and inflicting no other damage than slight abrasion of the skin. The boy's injuries were terrible. The bullet fractured the lower jaw, almost severed the tongue, shattered the right half of the upper jaw, and came out between the inner angle of the orbit and the nose. The eye escaped entirely. The portion of the nose left consisted of skin and the deeper soft structures and, owing to the jaw on the left side also being fractured, was freely moveable. The native was seen inside a dark native hut by the light of a cheap candle. The hut was full of smoke and the atmosphere was extremely painful to one's eyes. In addition, a good view was obscured by old blood-clots and extremely foul pus, so that the precise nature of the injuries was extremely difficult to ascertain. The outer wall of the nasal fossa on the right side, the floor and septum seemed entirely destroyed and the superior and middle turbinated bones were exposed and bare. The boy's condition was extremely bad. He had a weak thready pulse, very rapid. He had rapid shallow breathing and



Showing appearance of wound.

painful cough, and his temperature was 103° F. His tongue was dry and covered with thick brown fur. He appeared to be moribund and if he lasted out the next few hours seemed in great danger of septic pneumonia or septic mischief extending inside the cranium. I gave him one chance in a 1000 and advised against his being carried to the nearest hospital, 15 miles away, as I thought that the journey would destroy his only chance. His brothers were feeding him on Kaffir beer only, administered by means of a gourd roughly shaped like an ordinary spouted feeding-cup. The same night I sent him out some boric lotion, instructing his brothers to cleanse the wound frequently with the lotion and to apply hot fomentations. A week later I was told that the boy was better and a fortnight later, 16 days after the injuries, he walked 15 miles into the hospital.

The wound in the tongue had healed and the lower jaw had united. The cavity in the cheek had closed up considerably. The wound now seemed to be covered with healthy red granulations but the interior presented masses of dry brown-looking dead bone which from time to time came away. The native had lived for 16 days almost entirely on Kaffir beer.

The photograph reproduced was kindly taken for me by Private Timmins of the British South African police, hospital orderly. It shows the right nasal bone attached to the soft structure at the upper and outer corner of the wound and several portions of dead bone in the interior of the cavity. The right eye is partially closed by a lacrymal cyst.

Lomagundi, Southern Rhodesia.

A CASE OF HERMAPHRODITISM.

By LIONEL H. MOISER, M.B. LOND., L.R.C.P. LOND., M.R.C.S. ENG.,

LATE OBSTETRIC HOUSE PHYSICIAN AT GUY'S HOSPITAL.

THE patient was 19 years of age and rather masculine in appearance. Her voice was lower in tone than that of most women and she had no hair on her face. The hair on the pubes was normal in amount but it did not extend upwards to the umbilicus. The mons veneris was not well developed. The breasts were small and ill-developed, much the same in appearance as ordinary male breasts, and the nipples were small. The labia majora were normal in appearance but the labia minora were very small. The clitoris was very much hypertrophied, being one and a half inches in length and almost half an inch in diameter; the glans and prepuce were well developed, as also was the frænum. There was no meatus at the distal extremity of the clitoris. The meatus urinarius was in the normal position for the female. The vagina was two inches in length and small in circumference, the index finger being inserted with difficulty; the upper end of the vagina was slightly narrowed and blind. The hymen was absent. On examination under an anæsthetic no uterus or ovaries could be felt, neither was there any Fallopian tube. No testicles were felt.

Previously to Christmas, 1903, the patient never menstruated at all, but each month since that time she had had epistaxis, the onset being at regular intervals and each attack lasting about five days. Concurrently with these attacks she had an aching pain in the left ovarian region. Shortly after admission to the Royal Hants County Hospital on June 18th, 1904, she had a severe attack of pain in the left ovarian region which lasted eight or nine days; there was also slight epistaxis on one or two days. It was thought that she must have an ovary, either in a cystic condition or degenerated in some other way.

A laparotomy was performed to see if anything could be done to relieve the pain; no ovaries, uterus, Fallopian tube, or testicles were found. The vermiform appendix was about three inches in length and contained seven hard fæcal concretions. This was removed. Since that time she has not had any recurrence of pain. Her temperature was normal throughout.

For permission to publish these notes I am indebted to Dr. H. E. Wingfield, physician to the Royal Hants County Hospital.

Winchester.

CHLORATE OF POTASSIUM IN HABITUAL ABORTION.

By GEORGE S. S. HIRST, M.B., C.M. EDIN.

THE following notes may be of interest to the readers of THE LANCET.

In May last I was called to see a pregnant woman who 11 times previously had aborted during and after the third month of pregnancy. She and her husband were most anxious to have a living child and with this object she had consulted medical men during each pregnancy after the third—that is to say, she had been under medical treatment during the last eight pregnancies. Of the 11 abortions three had taken place during the third month, two during

the fourth month, five during the fifth month, and one during the seventh month. She could only attribute one abortion to physical causes—viz., one at the fourth month when from a fright she fell down and the abortion followed on the same evening. During the last pregnancy she had taken under the advice of her medical man aletris cordial but she miscarried at the seventh month. She could attribute the miscarriage to no cause. As it was the sincere wish of herself and her husband to have a living child she had always taken the greatest care of herself during pregnancy. On May 20th I ordered the patient to take two and a half grains of chlorate of potassium three times a day, which she took regularly up to Sept. 4th. On Sept. 6th she was delivered of a full-time living female child. Her labour was easy and the puerperium was unattended by complications. The child, though small, is perfectly healthy. The mother is a perfectly healthy woman suffering from no misplacement of the uterus or other cause likely to produce abortion.

Treherbert.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

President's Address.—Case of Gigantic Renal Calculus.

THE annual general meeting of this society was held on Oct. 10th, Dr. F. DE HAVILLAND HALL, the President, being in the chair. The treasurer's report and balance sheet, as passed by the auditors for the year ending Sept. 30th, were presented and adopted. The retiring President and the retiring honorary secretary, to whom the usual votes of thanks were accorded, then vacated their respective offices and Dr. de Havilland Hall inducted Mr. John Langton, the incoming President, into office.

The first ordinary meeting of the society was afterwards held, when Mr. LANGTON delivered his presidential address.

The PRESIDENT commenced his address by giving expression to his deep appreciation of the honour which the society had conferred upon him and remarked upon the discussions which had taken place at the society and which often added greatly to the scientific value of the communications made at the meetings. He referred to the losses which the society had incurred by death during the past year, especially mentioning the names of Dr. T. Gilbart-Smith and Sir W. Mitchell Banks. He then directed attention to various problems in pathology. Since the discovery of tubercle bacillus great progress had been made and Great Britain now occupied the proud position of having the lowest death-rate from tuberculosis, Russia having the highest. Referring to the progress of surgery, he emphasised the value of aseptic as compared with antiseptic methods. The pathology of cancer was then referred to and the importance of the discovery of the conjugation of young cancer cells by Dr. E. F. Bashford was mentioned. The radical cure of hernia, an operation which dated from the time of Celsus, was an important practical matter. Statistics from hospital practice on the ultimate effects of these operations were fallacious. It was necessary to trace cases for two, three, or four years before the real results could be measured. He had operated on 2319 cases, only 19 of which had been fatal, or less than 1 per cent. The degree of perfection of the results depended very much on the details of the operation. Out of 246 cases operated on in private he had ascertained the results in 214. Three cases had been fatal—two from venous embolism and one from acute sepsis. Only 26 of these cases had relapsed. The chief question relating to the radical cure of hernia before the profession at the present time was the best age at which to perform the operation. Some advocated it as early as possible. The proper time varied with circumstances but the operation was best done in early life. Herniæ in children were apt to disappear from time to time and the causes of this were considered. Continuous pressure never resulted in cure. Strangulation in children was always acute but with rest and warm baths the hernia could generally be reduced. The operation for the radical cure of hernia had taken nearly 2000 years to perfect but the problem had now been solved. In conclusion the President referred to the visit of the French physicians and surgeons to England, extending to them a cordial welcome in the name of the society and inviting those present to take part in the discussion.

Mr. A. MARMADUKE SHEILD read a paper entitled "A Case of Gigantic Renal Calculus, illustrated with Remarks on Cases where Renal Stones form Obvious Tumours," which is reported *in extenso* at p. 1074 of our present issue.—Mr. A. W. MAYO ROBSON congratulated Mr. Sheild on the success of his operation. It was clear that large calculi such as these must give rise to abdominal tumour but its renal origin could be detected by distending the colon with air. It could be done simply by a Higginson's syringe. This method, in his experience, had only failed on one occasion, in a case of suprarenal tumour. The x rays had considerable limitations: they would not show up uric acid calculi unless very large. Phosphatic and oxalic calculi were less transparent.—The PRESIDENT concurred in the untrustworthiness of the x rays. Affirmatively they were of value but not negatively. It was a point of some practical importance that the larger the stone and therefore the less its mobility the less acute and the less marked were the symptoms.—Mr. F. SWINFORD EDWARDS had met with calculi of from two ounces to two and a half ounces but never calculi of such a size as that exhibited. He concurred in the remarks of the previous speakers relative to the x rays and the advisability of removing the whole kidney in such cases at the time of the operation.—Professor AMBROSE MONPROFIT (Angers), who spoke in French, referred to an interesting case under his care of a young woman in whom was found at the operation a large ramifying calculus. The kidney was left behind but a fistula resulted which necessitated a second operation for the removal of the renal substance.

SOCIETY FOR THE STUDY OF INEBRIETY.—A quarterly meeting of this society was held on Oct. 11th, Dr. Harry Campbell, the President, being in the chair.—Dr. Charles F. Harford delivered an address entitled "The Drinking Habits of Uncivilised and Semi-civilised Races" and said that the protection of the weaker races of the world from demoralisation by the liquor traffic had for many years past occupied the attention of a special committee, the Native Races and the Liquor Traffic United Committee. In the course of these investigations some valuable facts had been recorded concerning the drinking habits of these races. These habits differed in each country. Perhaps the most convenient method of considering this subject was to classify the different kinds of drinks commonly used, noting where possible the way in which they were used and the effects which they produced. They were as follows:—1. Non-alcoholic beverages.—Water, milk, palm wine, and cocoanut milk when fresh, tea and coffee, and drinks made with various kinds of meal and water. 2. Native fermented drinks.—Various forms of corn beer of varying alcoholic strength, palm wine, cocoanut milk, and the like which had been allowed to ferment. 3. Distilled liquors.—Native spirits (especially such as were prepared in India), Cape brandy, and potato spirit, prepared especially in Germany for consumption in West Africa. These classes of liquor might be taken as samples of the drinks used by the native races, especially of India and Africa; the wines, beers, and the better forms of spirits manufactured in England and other European countries were almost left out of account as they were in the main too costly for wide use. 1. Non-alcoholic beverages.—Chiefly used by the races concerned with their meals. 2. Native fermented drinks.—Palm wine and similar products did not usually contain a large percentage of alcohol but when large quantities were taken intoxication might be produced. Sir William MacGregor estimated the strongest form of palm wine to contain less than 3 per cent. of alcohol. There were many varieties of corn beer. Mr. Joseph Orpen of Rhodesia had given some valuable information about different kinds of what were known as Kafir beer; one form, "leting," he described as an acid refreshing drink of little or no intoxicating quality. "Joala," on the other hand, more properly known as Kafir beer, was generally made with the object of producing drink of the greatest intoxicating strength attainable by native manufacture. It was used purposely to produce its toxic effects and was drunk in large quantities till the stomach was quite distended. It had a stupefying effect and in addition produced violent headaches and indigestion, even when not mixed with spirits, which was often done. Probably drugs such as bhang were frequently added to these native drinks for purposes of intoxication

and this accounted for much of the evil produced by them. 3. Distilled liquors. Mr. H. H. Mann, M.Sc., had furnished some valuable particulars as to native spirits manufactured in India. Some of those prepared in Assam, for instance, were particularly injurious, containing large quantities of fusel oil and other specially poisonous ingredients, in some cases about 20 times as much as would be found in a properly matured Scotch whisky. This he attributed to want of supervision by the Government and the fact that the spirit was not allowed to mature. In Cape Colony a pernicious form of brandy was made from grapes known as "Cape smoke." Samples of this were said to have been found to contain copper sulphate and it appeared to be intended particularly for native consumption. In West Africa immense quantities of potato spirit, manufactured in Germany for the purpose, formed the largest part of the trade of Great Britain as well as of France and Germany with the West African natives. This spirit was frequently shipped in a concentrated form containing about 80 per cent. of alcohol and some samples of this were found to contain as much as 4 per cent. of fusel oil. Trade gin and rum, as they were called, could have but one use—viz., the intoxication of the native. No respectable European would ever touch them and they had been known to be used for mixing with paint instead of turpentine. They were used principally on the occasion of funerals and at festivals. The West Africans were naturally a sober people and they did not want the drink but were too weak to resist it if taste for drink had been acquired. Drunkenness was not so easily noticed among the Africans, as they drank at home and not at public bars, so they were able to sleep off the effects before coming before the public. On the occasion of festivals, however, drunkenness was sometimes very widespread.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 7th, Dr. David Newman, the President, being in the chair.—Dr. T. K. Monro showed a case of Sporadic Cretinism. The patient was a female, aged 23 years. She was born in England in a large manufacturing town and it was only when she was unable to speak or to walk at the age of 12 months that any abnormality was suspected. She had never been able to speak intelligibly. She made no attempt to walk till she was six years old and she could scarcely be said to walk even yet. She was able to feed herself with a spoon and to recognise her friends but was otherwise almost devoid of intelligence. In the region of the thyroid there was a strip of tissue in front of the trachea almost as thick as a piece of coarse thread; this might perhaps represent the gland. It was found that seven grains of thyroideum siccum in two days were the maximum dose that could be taken with impunity and under this treatment her height increased from 41 to 43 inches in less than three months.—Dr. J. H. Nicoll showed specimens from a series of 13 cases in which the vermiform appendix was on operation found in an abnormal site.—Dr. Nicoll also showed a large number of calculi successfully removed by operation. The calculi were of varying nature and origin—salivary, intestinal, pancreatic, biliary, renal, urethral, vesical, and prostatic.—Dr. Nicoll also showed a case of Hydrocephalus treated by meningeal drainage and two cases of Mastoidectomy with preliminary occlusion of the internal jugular vein.—Dr. G. H. Edington read notes on the Treatment of Tuberculous Glands in the Neck by Excision.

NEWPORT MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 5th. There was a large attendence of members. The reports of the honorary secretary and honorary treasurer, which showed that the society is in a most satisfactory condition both with regard to the work done and its financial position, were read and adopted. The following officials were elected for the ensuing year: President: Dr. T. Morrell Thomas. President-elect: Mr. W. Jones Greer. Ex-President: Dr. J. Howard-Jones. Honorary secretary and treasurer: Dr. R. J. Coulter. Committee: Mr. O. E. B. Marsh, Dr. R. J. Paton, Mr. W. Bassett and Mr. C. Brooke Gratte.

AT the quarterly meeting of the directors of the Naval Medical Supplemental Fund held on Oct. 11th Sir James N. Dick, K.C.B., being in the chair, the sum of £55 was distributed among the several applicants.

Reviews and Notices of Books.

Handbook of Physiology. By W. D. HALLIBURTON, M.D. Lond. F.R.S., Professor of Physiology, King's College, London. Sixth edition. With nearly 700 illustrations, including some coloured plates. London: John Murray. 1904. Crown 8vo, pp. 902. Price 15*s.* net.

THE original lectures on Physiology delivered in the school of St. Bartholomew's Hospital by Sir James (then Mr.) Paget in 1844 and for several succeeding years constitute the foundation of this work. The lectures were characterised by a novel and happy blending of histology and of pure physiology. The fluency of the lecturer and the lucidity of his diction, together with the interest that he contrived to excite in the minds of his hearers, enthralled their attention and led to crowded benches. The defect of the teaching, not remedied till many years had elapsed, was that it was purely oral and that no provision was made for practical work. The notes made by Dr. Kirkes of Paget's lectures were with some additions, especially in the subject of development, thrown into book form and published by him with the sanction and approval of Paget. The work being well illustrated and written in simple language became very popular amongst students and went through many editions. The present edition is the third since it was placed in the able hands of Dr. Halliburton. As might be expected, the chemical side of physiology, which in the earlier editions was much neglected, has been carefully brought up to date and the work throughout has been thoroughly revised.

It is interesting, since it shows the increasing tendency to specialisation, to find that so distinguished a physiologist as Dr. Halliburton has not disdained to ask for, and to obtain, assistance in the difficult subject of hæmodynamics from Dr. T. Gregor Brodie who has devoted much attention to it. Accordingly, we find good paragraphs upon the frequency of the heart's action and upon the work of the heart. The output of the heart is estimated at 110 cubic centimetres per beat and the mean aortic pressure during the systole is calculated to be 156 centimetres of blood or 12 centimetres of mercury, a very different estimate from that originally made by Professor Volkmann. Many chapters of the book are, of course, not materially altered from the later editions. Those that have undergone most revision relate to the circulation of the blood and the nervous system. Thus, in regard to the still vexed question of the cause of the sounds of the heart, Dr. Halliburton, in the first place, admits that the second sound is entirely due to the vibration consequent on the sudden stretching of the semilunar valves of the aorta and pulmonary artery; there are, however, reasons for considering that the first sound is only in part attributable to the stretching of the auriculo-ventricular valves and in part to the contraction of the cardiac-muscular fibres; he remarks that there is much to be said "against the view that the cause of the first sound is entirely or even largely due to vibration of the auriculo-ventricular valves" and the reasons which he assigns are that "any sound produced by the valves must be very quickly damped by the high pressure acting on their ventricular surfaces only," whilst the "sustained character of the sound (throughout practically the whole of the ventricular systole) is, on the other hand, exactly what is to be expected if it is of muscular origin. The argument that the extent to which the muscle sound contributes to the production of the first sound can be estimated from the sound heard in an isolated and empty heart is quite fallacious, since under these conditions the muscle is contracting against no resistance." This interesting question must therefore be

considered *sub judice* until some means are discovered of distinguishing the qualities of the two notes that are produced by the valvular and the muscular sounds respectively. It is stated that the work performed by the heart in the day is equal to that of a labourer working hard for two hours. Considerable additions have been made in the paragraphs dealing with the physics of the circulation and drawings are reproduced of Fick's kymograph as improved by Hering, and other forms of manometer as well as various recently devised instruments for determining the velocity of the blood in the vessels are given.

There are good drawings of Nissl's granules with the changes which they undergo during a discharge of energy, for it is certain that on examination of nerve cells made after an epileptic fit where much energy has been expended the Nissl granules will be found to have disappeared or to have broken up into a fine dust so that the cells stain more uniformly with basic dyes such as methylene blue. Hence M. Marinesco has applied the term kineto-plasm to the nucleo-proteid of which micro-chemical investigation has demonstrated Nissl's granules to be composed. Dr. Halliburton observes that it still remains doubtful whether the changes observed are due to a transformation associated with intense activity or whether they may not be caused by venosity of the blood. The cells are very sensitive to altered vascular conditions, anæmia, for instance, producing a similar change accompanied by swelling of the cell together with enlargement and in extreme cases extrusion of the nucleus. High fever (hyperpyrexia) causes a very similar change which is doubtless associated with the coagulation of the proteids of the cell protoplasm by the high temperature. The important general law formulated by van Gehuchten and Ramon y Cajal is here laid down that all nerve impulses are axipetal—that is, they pass towards the attachment of the axon by which they leave the body of the cell. In other words, the direction of an impulse is towards the body of the cell in the dendrons and away from it in the axons, but Dr. Halliburton notices a very striking exception—viz., in the typical efferent root cells; here the impulse passes to the body of the cell by one axon from the periphery and away from it to the spinal cord by the other.

There is an interesting chapter on the vaso-motor nervous system in which the important researches that have been recently made upon this subject are summed up. Dr. Halliburton has thought it advisable to introduce a section on osmotic processes which hold so important a position in many of the phenomena of absorption, nutrition, and excretion. In the chapter on Respiration few additions have been found to be necessary but an instructive tracing is introduced showing very clearly the effects of asphyxia on the cardiac and respiratory systems respectively. Under the head of the Chemical Composition of the Body some introductory paragraphs have been added supplying the student with modern views on the constitution of the carbohydrates, alcohols, and ketones. A good account of the mammary glands and of the changes that take place in the gland cells during secretion is given and the results of inquiries of various observers into the electrical variations in glands are fully described. Dr. Halliburton has not overlooked the valuable observations on digestion made by the Russian physiologist Pawlow which were recently noticed in these columns, as well as those of Starling and Hamburger, all showing "a beautiful adjustment in the quantity and composition of the various juices to the kind of work they have to do," each step following in an orderly manner as the result of the previous changes. Important additions have been made in those sections which treat of the localisation of the functions of the brain and their restriction to definite motor and sensory areas, in regard to which, however, considerable differences of opinion still exist. The chapters on the Senses and upon Development have been revised. In conclusion, the student who purchases the treatise and thoroughly masters its contents will find himself possessed of sufficient physiological knowledge to comprehend the functions of the body in their relation to each other and to apply that knowledge in the practical work of the profession.

An Atlas of Human Anatomy for Students and Physicians. By Professor CARL TOLDT, M.D. Assisted by ALOIS D. ROSA, M.D. Translated from the third German edition by M. EDEN PAUL, M.D. Brux. Fourth Section: Splanchnology (Figs. 641 to 932 and Index). London: Rebman, Limited. 1904. Price 9*s.* 6*d.* net.

THIS seems to be an age of anatomical atlases and the publishers appear to be inspired by the sentiment, if not by something more tangible, which determined Madame d'Arconville (1720–1805) to arrange for the translation and publication of the famous work of Professor A. Monro of Edinburgh, "The Anatomy of the Human Bones and Nerves," which appeared under the title "Traité d'Ostéologie," Paris, 1759.

The student of medicine can learn much from the perusal of an excellent atlas, when it is used to recall and to reinforce impressions gained from actual dissection and inspections, more especially when these impressions may have become somewhat dim. The name of Professor Toldt is a guarantee of accuracy of detail as well as of artistic merit. This atlas has had already great success both in Austria and in Germany and perhaps its success has led to the production of other efforts in the same direction.

In the fourth section, on splanchnology, the histological illustrations are necessarily few; they are at once simple and effective. The emphasis is on the naked-eye anatomy. Some of the illustrations are in advance of those usually found in English works—e.g., Figs. 718 and 719, showing the duodenum with the orifices of the mucous glands in the common bile-duct and the ampulla of Vater, and Fig. 745 showing the interior of the gall-bladder.

The chapter dealing with the respiratory organs, their relation to the heart, their appearances, and relations in coronal and other sections of the trunk, is admirable and instructive. The plates and drawings illustrating the section on the uro-genital apparatus are equally good. Those plates showing the topographical anatomy of the thoracic and abdominal viscera perhaps contain a little too much detail. Still, nature made man a very complex organism and the truth has to be set forth as best we can with the aid of exact drawing and coloured boundaries. The appendix contains notes by the translator (pp. 538*a*–538*j*).

The quarto form gives the work a stately look and affords ample room for the "Kolossal" array of names (Latin and English equivalent) which describe—we cannot say adorn—each illustration. Still, the dotted line with a label in type at one end and the object at the other is necessary. Perhaps by his numerous notes the translator in his enthusiasm for his subject makes the array of print even more formidable. Possibly the "love he bears to learning," and anatomy in particular, is at fault.

Abernethy, as is well known, once said on seeing a great crowd of medical students assembled to commence their medical studies, "Good God, gentlemen, what is to become of you all!" Let anyone take a glance at a fully dissected part in this volume with its several items duly labeled and he can only say, "May Heaven help the already overburdened student and increase his receptive capacity." As to the array of knowledge depicted it makes us think

of the kindly teacher in the "Deserted Village" of Oliver Goldsmith—

> "And still the wonder grew
> That one small head could carry all he knew."

How does the head of the average medical student "carry" all that he is expected to know in these days? What is required of him is "prodigious" and anything pictorial or otherwise which will lighten his labours is to be welcomed.

Food Inspection and Analysis. By ALBERT E. LEACH, S.B., Analyst of the Massachusetts State Board of Health. New York: John Wiley and Sons; London. Chapman and Hall, Limited. 1904. Pp. 787. Price 31*s.* 6*d.*

INCIDENTALLY this comprehensive work on the subject of food inspection and analysis gives the reader a glimpse of the methods employed in the United States of America for ensuring the sale of pure and unadulterated food. The general subject is attacked with that thoroughness which is characteristic of those engaged in practical scientific matters in the United States. The Massachusetts State Board of Health in particular has been a pioneer in many branches of public health work. It was the first of all the States to enact pure food legislation and for 20 years it has adopted a well-established system of food inspection, prosecuting cases under its laws through the Food and Drug Department of the State Board of Health. Mr. Leach is the analyst to the Massachusetts State Board of Health and in view of the excellent work done at the instance of this board by its officers this volume will be read with considerable interest by those practically concerned in the administration of the food laws of this country. A point well worth attention in regard to administration is that in many instances in cases of prosecution there is practically no expense incurred for legal services. "Complaints are entered by the collector, or as he is termed inspector, who makes complaint not in his official capacity but as a citizen who under the law has been sold a food found to be adulterated and who is entitled to conduct his own case, which he does with the aid of the analyst and such other witnesses as he may see fit to employ. Experience is readily acquired by the inspector in conducting such cases in the lower police or municipal courts where they are first tried, and years ago the services of legal counsel in Massachusetts were dispensed with as superfluous."

There can be little doubt that in this country offences often go unpunished through the existence of a complex state of the law from which expert lawyers derive considerable advantage. Even our Lord Chief Justice has put such an elastic interpretation on the law as to declare that the object of the Sale of Food and Drugs Act is to prevent people from being poisoned, and on this ground he dismissed a case in which glucose had been substituted for cane sugar in the manufacture of marmalade. As a matter of fact, owing chiefly to the labours of THE LANCET Special Analytical Sanitary Commission, which was instituted by the founder of this journal in 1850, actually poisonous substances are now rarely purposely added to articles of food. The public analyst's task nowadays is to deal with the enormous amount of substitution and fraud which is practised. Occasionally he, of course, finds substances in food which are prejudicial to health, as in the case of certain preservatives and colouring matters.

It is interesting to note also that in the United States a more effective method than inflicting fines upon the offenders is employed. Mr. Leach states that there are three practical methods of suppressing the sale of adulterated foods—namely, by publication, by notification, and by prosecution, and these may be separately employed or used in connexion with each other according to the powers conferred by law on the commission, board, or official having in charge the enforcement of the law. Under the law of some States lists of adulterated foods with their brands and manufacturers' names and addresses are published and sometimes public lists are issued in addition of unadulterated brands. This, it seems to us, is an excellent plan and its application was suggested some years ago in a Bill before Parliament but unfortunately this particular clause was rejected. Mr. Leach says that this method has a decidedly beneficial effect in reducing the extent of adulteration, and we can well believe it, while it is a plan which involves less trouble and expense than any other method. A system of warning also proves salutary and to some extent this method is pursued in this country, though it is to be feared that it does not act as effectively as it might owing to the fines inflicted being so ridiculously small.

Mr. Leach's work is divided into 19 chapters. It is distinguished from most standard analytical works by a section on flesh foods and the inspection of meat. The author has taken great pains to include the best methods of analysis which are directed to the detection of adulteration. At the end of each chapter he gives copious references to the literature of the special subject treated. These references are practically international and add very much to the value of the work. In regard to antiseptics in food we learn from Mr. Leach that the condition of legislation, generally speaking, in the United States is in much the same position as it is in this country and in consequence it is difficult to maintain a complaint under the food laws. In Massachusetts special laws exist, however, under which it is required that in the case of all foods containing preservatives the name and percentage of such antiseptics as are used must appear plainly on labels on the packages. We should like to see the general principle of printing the description of an article of food enforced in this country. The public then would know at least what it was buying and the practice of deception would to a large extent be suppressed by such a legal requirement. The section on spirits is not very complete and the author appears to give no importance to the discrimination of pot still and patent still spirit. Here, again, all that need be demanded is an honest label. At the end of the work is an excellent series of plates illustrating the structure and appearance under the microscope of many articles of food.

The book is undoubtedly a standard work and English analysts will gain many a valuable hint from it as to the best analytical procedure to adopt in the detection of adulteration. The processes recounted bear evidence of the author's personal experience of them. He has drawn on the literature of the subject of all civilised countries and has thus been able to crystallise the analytical advances that have been made throughout the world. We can cordially recommend the work to all those who are concerned in the administration of our food laws.

LIBRARY TABLE.

The Human Sternum. Three Lectures delivered at the Royal College of Surgeons of England, November, 1903. By ANDREW MELVILLE PATERSON, M.D. Edin., Derby Professor of Anatomy in the University of Liverpool; Hunterian Professor at the Royal College of Surgeons of England. London: Published for the University Press of Liverpool by Williams and Norgate. Pp. 89, with bibliography and plates. Price 10*s.* net.—Professor Paterson publishes his Hunterian lectures in the form of a most readable and interesting monograph. The substance of his communication has already given, and will continue to give, rise to much controversy. His thesis is that the idea of vertebrate segmentation has been carried too far by its exponents. The accepted view of the morphology of the sternum is that it consists of elements termed sternebræ which are derived from the costal cartilages and are segmental in nature, each

sternebra with a pair of ribs and a vertebra constituting a typical body segment. Professor Paterson holds that the evidence for the origin of the sternum from rib elements is insufficient and, on the contrary, believes that the primary condition of the sternum is one in which it is associated with the shoulder girdle, whilst the costal connexions are later developments. In this strikingly heterodox view he claims the virtual support of T. J. Parker and Professor J. Cleland, the former of whom was perhaps the originator of the germ of the idea. The teratological argument based on the occurrence of fissured sternum is held to be disposed of by the following considerations: first, the great rarity of the occurrence of a true and complete fissure; and secondly, the possibility of an explanation based on the stretching of the foundation tissue of the bone by the expansion of the thoracic viscera, with consequent failure in ossification. The presence of ectopia cordis in the embryo chick is advanced as evidence of this process. A study of the foundation of the sternum in the pre-cartilaginous stage of formation demonstrates, according to the author, that it is intimately connected with the shoulder girdle and is quite distinct from the ribs. The ossific centres are of no morphological value, being merely influenced in their location by certain mechanical forces to which the bone is subjected. It must be admitted that Professor Paterson adduces considerable evidence both from the writings of others and from his own investigations to prove that the sternum originates as he describes and that its stage of development is always in advance of that of the ribs from which it is commonly supposed to be derived. In this contention he differs entirely from the classical opinion of Ruge, the great advocate of the costal origin of the bone. Ruge's deductions come in for severe criticism and it is suggested that the facts which he adduces may be open to quite a different interpretation. Enough has been said to indicate the scope of the work and Professor Paterson must be congratulated on the way in which it has been presented and illustrated. There is no doubt that the last word has not yet been said on the subject.

Atlas und Grundriss der Haut-Krankheiten. (*Atlas of, and Introduction to, the Diseases of the Skin.*) By Dr. FRANZ MRACEK. Second much improved and enlarged edition. Munich: J. F. Lehmann. 1904. Pp. 284 and 115 Plates. Price 16 marks.—We have on many occasions in reviewing the series of medical handbooks issued by these publishers spoken in the highest terms of the usefulness of the works contained in the series and we have praised especially the admirable coloured illustrations. Few departments of medicine so well repay pictorial illustration and the coloured drawings reproduced in this work faithfully portray the conditions which they are intended to represent. To the large number of illustrations contained in the first edition have been added some 30 more, so that we find, indeed, a fairly extensive atlas of the diseases of the skin. The text gives a good account of the main affections of the skin but the most valuable part of the work is undoubtedly the series of plates.

Les Fractures de l'Humérus et du Fémur. (*The Fractures of the Humerus and of the Femur.*) By Dr. THEODORE KOCHER, Professor of Clinical Surgery at the University of Berne. Translated from the German by Dr. L. SENN, Chief of the Surgical Clinic at the University of Lausanne. With 105 figures and 36 plates. Genève: Henry Kündig. Paris: Félix Alcan. 1904. Pp. 286. Price 15 francs.—The publication of any work on surgery by Professor Kocher must excite the interest and attention of every surgeon and as the medical men in this country who read French are much more numerous than those who read German this translation into the former tongue must make the work available to many who otherwise would have been unable to peruse it. The author tells us in his preface that the present work does not claim to have exhausted the subjects which he deals with but he hopes later to say more. The work is based on 20 years' study of the cases in the surgical clinic at Berne and Professor Kocher has not hesitated to devise new names for conditions which have not hitherto been adequately differentiated. Even though the volume is devoted to fractures of the humerus and femur only it deals really with fractures of the upper and lower ends of the humerus and the upper end of the femur and the full and careful consideration shown in discussing each fracture gives the reader great confidence in accepting the views of the author. The large number of illustrations of actual specimens increases materially the value of the work and many notes of cases are given also. Dr. Senn's translation is good.

THE HUXLEY MEMORIAL LECTURE.

THE fifth annual Huxley Memorial Lecture was delivered at Burlington House, London, on Oct. 7th before the Anthropological Institute of Great Britain and Ireland by Dr. J. Deniker, President of the Anthropological Society of Paris. Mr. H. Balfour, the President of the institute, was in the chair. In illustration of the address, which was delivered in French, a large number of fine lantern pictures were shown.

Dr. DENIKER, who is the first foreigner to receive the Huxley Memorial medal of the institute "for distinguished service to anthropology," said that Huxley was the first to make the twofold division of the peoples of Europe into xanthochroid, or light-complexioned, and melanochroid, or dark-complexioned, races. Beddoe and Broca were other pioneers in European ethnographical research. To the two races mentioned above a third was soon added—the Mediterranean race—and he (Dr. Deniker) had in 1870 made a further step by dividing the population of Europe into six main races. For many years he had been collecting statistics concerning the stature, colour of eyes andh air, and head measurements of the various nationalities, and now, in spite of certain lacunæ, some of which he regretted to observe occurred in Britain, he was able to say that he possessed data covering the whole of Europe.

In dealing with head measurements he first enunciated his own classification of types according to the cephalic index or ratio obtained by reducing the greatest breadth of head to a percentage of the extreme length. In other words, the breadth of the head is divided by the length and the quotient multiplied by 100. In each class these ratios were as follows:—

Hyperdolichocephalic (very long-headed) ...	73·0—75·9.
Dolichocephalic (long-headed)	76·0—77·9.
Sub-dolichocephalic (moderately long-headed)	78·0—79·9.
Mesocephalic (medium-headed)	80·0—81·9.
Sub-brachycephalic (moderately short-headed)	82·0—83·9.
Brachycephalic (short-headed)	84·0—85·9.
Hyperbrachycephalic (very short-headed) ...	86·0—88·9.

He then went on to show that Europe could be divided into four regions—namely, (1) a region of long-headed people with medium-headed areas in the north-west; (2) a region in the south-west characterised by even greater length of head; (3) a very short-headed region in western central Europe and in the immediate west of the Balkan peninsula; and (4) a region comprising Russia and Poland subdivided into three, moderately long-headed in the centre and medium-headed on the east and west. The first group was, on the whole, distinguished by tall stature and fair complexion and the second by short or medium stature and brown complexion. He next proceeded to the subject of stature. The great mass of his data was compiled from measurements of conscripts, but by an ingenious method the data could be modified so that they represented fairly the typical stature of the male population. In Europe there were no people of very short stature, according to the classification invented by Topinard (under 1600 millimetres, or 63 inches); on the other hand,

this region of the earth's surface was distinguished by the tallest race known—namely, the highlanders of Scotland. Hence for the purpose of this lecture he would speak of statures ranging between 1650 and 1675 millimetres as medium, those below these measurements as short, and those above as tall. Tall statures were, with a very few exceptions, particularly well represented in the north-west; the rest of the population of Europe was again with certain exceptions, chiefly in the Balkan peninsula, of medium or short stature. People of medium stature were found grouped round the regions where the tall peoples occurred, and connected the tall races of the north with those of the south. Short statures he divided into three groups, eastern, western, and southern, and showed how the eastern zone communicated by narrow "channels" with other centres of short stature. The limits of the southern group practically coincided with those of the Ibero-insular race.

In grouping the peoples of Europe with regard to colour of complexion, eyes and hair, he had taken as the basis of his classification the brunette type (eyes and hair dark brown or black) as the most easy of recognition. Those peoples among whom were found from 17 to 30 per cent. of brunettes may be called intermediate. Where less than 17 per cent. occurred the population was termed blonde, where more than 30 per cent. occurred it was termed dark. According to this grouping the two extremes were the Swedish area with 3 per cent. of brunette type and Italy with 70 per cent. of brunette type. North Europe was mainly blonde, South Europe dark, and Central Europe intermediate. He traced the southern limit of the blonde races through the various countries (showing that it nowhere reached further south than the latitude of 50°) and also the more irregular northern limit of the dark peoples. In the intermediate zone blonde areas were rare (one of them occurred in South England—i.e., Berkshire, Oxfordshire, Hampshire, Sussex, and Middlesex), while dark areas were fairly numerous but individually very small. Intermediate areas in the blonde zone were only found in the British Isles, but in the dark zone they were fairly frequent in Western Europe. From these data and certain other considerations relating to shape of face and nose, character of hair, and other peculiarities he had been confirmed in his theory that the present population of Europe is composed of the following six main races.

1. The first race was blonde, wavy-haired, long-headed, and very tall, with a long face, and a straight prominent nose; it was designated as the northern race because its modern representatives were confined almost exclusively to North Europe. This was the Cymric race of Broca, the Germanic or Reihengräber race of German authors, the Teutonic race of Ripley, or the Homo Europaeus of Lapouge.

2. This race was blonde, straight-haired, moderately short-headed, and of short stature, the face was broad and square and the nose often retroussé; it was designated as the Eastern race, since its principal home was in Eastern Europe.

3. This race was dark-complexioned, with hair sometimes curly, long-headed, of very short stature, and with a straight or retroussé nose; it was designated as the Ibero-insular race. This was the Mediterranean race, or Homo Mediterraniensis of certain authors, found chiefly in the Iberian peninsula and the islands of the Western Mediterranean.

4. This race was dark-complexioned, very short and round-headed, of short stature, with a round face, broad nose, and thick-set body; it was designated as the Cevenole or Western race. This type occurred in its greatest purity in the extreme West of Europe, though it was found sporadically elsewhere. This was the race called variously by other authors Celtic, Celto-Ligurian, Celto-Slavonic, Sarmatian, Rhetian, Ligurian, or Homo Alpinus.

5. This race was very dark-complexioned, moderately long-headed, and fairly tall; it was designated as the Littoral, or Atlanto-Mediterranean race, situated on the coast of the Mediterranean from Gibraltar to the Tiber and in occasional groups on the Atlantic littoral, but never more than 150 miles from the sea.

6. This race was dark-complexioned, short-headed, and tall, having the nose slender and straight or arched; it was designated as the Adriatic or Dinaric race, which was found grouped round the Northern Adriatic, particularly in Bosnia, Dalmatia, Croatia, and the centre of the Balkan peninsula.

After a vote of thanks proposed by Mr. E. W. BRABROOK, C.B., and seconded by Professor GOWLAND, the Huxley Memorial Medal was presented by the President to Dr Deniker.

Looking Back.

FROM

THE LANCET, *SATURDAY*, OCT. 14, 1826.

BIOGRAPHY.

Biographical Notice of the late Professor LAENNEC.[1]

Theophilus Réné Hyacinthe Laennec, was born at Quimper, in Basse Bretagne, in the year 1781. His earlier years were spent at Nantes with his uncle, who it is supposed infused into his nephew that desire for medical knowledge, the cultivation of which gave the latter such a high reputation.

Young Laennec came to Paris in 1799; having been previously well instructed in the Greek and Latin languages. He there followed closely the clinic of Corvisart; it was there where he first commenced his anatomico-pathological researches, and acquired that knowledge of disease which he afterwards so successfully cultivated.

In the year 1802, two great prizes in medicine and surgery were awarded to him by the Institute, and in 1803, he graduated. His Thesis was intitled on the Doctrine of Hippocrates, as applied to practical medicine. There, as in every other occasion, he held up the father of medicine in that light which has caused him to be so much and so justly venerated by every lover of science.

At this period, pathological anatomy was not cultivated with that zeal which it is at the present day. The numerous detached pathological observations on the different parts of the body, suggested to Laennec the idea of bringing them together, in order to deduce certain general conclusions, and establish from them certain fixed principles. Dupuytren formed about the same time the same idea. And as the mode proposed by the one, was exactly the same as that laid down by the other, a dispute arose between these two illustrious pathologists, to whom the glory, as it is called, of arrangement should belong. The dispute was terminated by both of them giving lectures on pathological anatomy. This is the period at which the French themselves say that morbid anatomy became ranked by them amongst the medical sciences. It was at this time that Laennec studied and wrote most; for besides the great part of his time which was spent in reading the ancient medical classics, he contributed to the Bibliotheque Medicale, in fact he was the Editor of it for many years. It was at this time also, that he wrote several of the best papers on medicine, and morbid anatomy, which appeared in the first 23 volumes of the *Dictionnaire des Sciences Medicales*.

He was nominated to the Hôpital Necker in 1816, and it was now that he first entertained the idea of *mediate auscultation*, and that he applied it to the diagnosis of disease. In 1819, the first edition of his work appeared, entitled "Sur l'Auscultation Mediate;" but from the great exertions which the author required to make, his health became so seriously affected that he was obliged to go to the country for the purpose of recruiting his strength. He remained there for two years. At this time the stethoscope became the subject of considerable discussion, and even of ridicule.

After the first edition of the *Traité de l'Auscultation Mediate* was nearly sold, Laennec commenced a second edition, which is, in fact, so much improved, that it more deserves the name of a new work, than a new edition. This work, as many of our readers may know, was fortunately finished a short time previous to the commencement of Laennec's illness.

Laennec had long suffered from a slight pain in his right side, and diarrhœa. About the latter end of April, he was attacked with dyspnœa, accompanied with some slight fever, and left Paris for Kerlouarnec in Finisterre. He arrived there quite exhausted. His diarrhœa increased, and put a termination to his existence on the 13th of August, 1826, at the age of 45.

[1] Excerpts only have been transcribed. See also "Looking Back" in THE LANCET, August 20th, 1904, p. 548, and Sept. 3rd, 1904, p. 659.

THE LANCET.

LONDON: SATURDAY, OCTOBER 15, 1904.

Welcome and "Au Revoir."

CETTE semaine le corps médical anglais a été heureux de souhaiter la bienvenue aux confrères français qui sont venus à Londres afin de se rendre compte eux-mêmes de ce que notre organisation d'enseignement et d'hospitalisation offre de particulier ou de remarquable. Nous saluons dans ces messieurs non seulement les hommes déjà arrivés à la distinction qui nous ont honoré de leur présence mais aussi la jeune génération de médecins et chirurgiens de France, aussi épris que leurs dévanciers de la recherche des verités médicales et peut-être plus curieux que ceux-ci d'approfondir les méthodes et les organisations étrangères. Nous constatons avec plaisir ce désir, toujours grandissant, de connaitre la médecine anglaise et c'est avec une satisfaction toute particulière que nous avons fait ce qui dependait de nous pour faire de cette visite un succès qui pourra servir de précédent dans les années à venir. La science, dit on, n'a pas de frontières, mais, en verité, cette observation s'adresse plus spécialement à la science médicale, science cosmopolite et humanitaire par excellence. De temps en temps ses adeptes se réunissent en de gigantesques congrès où, malgré la diversité des langues, les hommes d'études parviennent tant bien que mal à échanger leurs idées. Mais l'organisation même de ces congrès internationaux, par la multiplicité des travaux et le nombre par trop considérable des adhérents, rend difficile, sinon impossible, l'étude des diverses institutions, médicales et autres, et nuit ainsi au but que l'on doit poursuivre en visitant les pays étrangers, savoir: l'étude comparée des moyens employés en différents pays pour assurer pratiquement l'assistance hospitalière, l'enseignement médical, la prophylaxie des maladies épidémiques, et autres services analogues. Cette excursion scientifique, destinée plus particulièrement à l'instruction des jeunes membres du corps médical des hôpitaux de France, devait répondre à ce désidératum. Nous voulions leur permettre de connaitre en particulier les diverses catégories d'hôpitaux, des laboratoires, des services d'hygiène dont est dotée la ville de Londres; nous voulions les mettre à même de contróler l'organisation qui assure l'isolement et le traitement des personnes atteintes de maladies infectieuses, enfin de se rendre compte des détails de ce qu'on peut appeler l'administration médicale. Même en ce qui concerne l'hygiène domestique il y a beaucoup à observer en Angleterre où l'hygiène individuelle joue un grand rôle. C'est avec une véritable satisfaction que nous constatons le succès de ce voyage d'études médicales et nous espérons que nos confrères remporteront un souvenir durable de leur visite à Londres. Nous désirons qu'en partant ils soient bien convaincus de notre sympathie profonde et sincère pour leur pays si fertile en découvertes ayant pour objet le soulagement de la souffrance humaine. La science ne peut que profiter de cette alliance qui envisage le bien de l'humanité et l'amélioration des conditions de la vie dans les centres populeux. Point n'etait besoin d'une entente cordiale pour que nous fassions bon accueil à nos confrères d'Outre Manche. L'entente scientifique n'est pas exposée aux accidents qui menacent les ententes politiques. Le médecin ne se soucie pas de la nationalité de ses malades et encore moins de leur position sociale. Les lois pathologiques atteignent impitoyablement le riche comme le pauvre, le blanc comme le noir. La médecine est au-dessus de ces différences et les études médicales planent à une hauteur que la science pure peut seule atteindre. Nous pouvons donc marcher la main dans la main à la recherche des solutions qui jusqu'à présent ont defié l'intelligence humaine; et cette alliance scientifique peut être durable, car ce ne sont pas les problèmes à resoudre qui manquent. Encore une fois, nous avons eu beaucoup de plaisir à accueillir nos hôtes et nous espérons que nos confrères français conserveront un souvenir ineffaçable de la sympathie et de l'affection que nous éprouvons pour eux. Nous ne leur disons pas adieu, simplement *au revoir*.

The Treatment of Tetanus.

THE treatment of tetanus is unsatisfactory. Whenever we find many remedies suggested for the treatment of a disease we may be certain either that the malady has a very great tendency to recover spontaneously or that most, if not all, of the remedies have little or no influence on the progress of the disease. Into the latter of these two classes we fear that tetanus falls. In the treatment of tetanus the remedies proposed are legion. Each in its time has had its ardent advocates, yet each in turn has been allowed to drop into obscurity to be succeeded by some other favourite of equally brief duration. Far back into the past we can trace this unsuccessful fight with tetanus. In the "Regimen of Acute Diseases," usually attributed to HIPPOCRATES but probably written by one of his followers, the usual forms of treatment advised for tetanus are venesection, the administration of wine, the inunction of ointments, and the use of fomentations. If these methods fail some bryony root is ordered to be given in wine but the writer evidently did not think very hopefully of the treatment that he advises, for he adds, "If the disease yields to these means so much the better, but if otherwise the prognosis must be modified accordingly." The modes of treatment advocated during the Middle Ages need not be detailed; suffice it to say that many strange procedures and weird drugs were suggested and no doubt employed but without any such beneficial results as would render needless further attempts to discover a trustworthy remedy.

One great cause of the uncertainty prevailing in the treatment of tetanus is the uncertainty of the prognosis. There are some diseases, such as German measles, let us say, which never end fatally, and there are others, such as hydrophobia, which, so far as we know, always terminate in death. In such maladies there is no difficulty in prognosis but in any disease which sometimes ends fatally and sometimes ends in recovery prognosis is often very difficult, and

therefore of necessity the difficulty of deciding on the value of a method of treatment is exceedingly great. It is not sufficient that in two or three cases the administration of some one drug has been followed by recovery, for with every form of treatment, or even without any treatment at all, a by no means small proportion of cases of tetanus recover. Statistics vary greatly and, of course, will to some extent be modified by the fact that treated and untreated cases are massed together; but we need not lay much stress on this, for it is doubtful if the influence of treatment on the disease has been very material. BRISTOWE acknowledged that "no treatment, so far as we know, has any curative influence. A certain number of cases get well under the most unfavourable circumstances; the great majority die in spite of the most strenuous efforts to save them." According to POLAND the average death-rate in tetanus is about 88 per cent. but this is perhaps a little excessive; probably 75 per cent. would be more exact. In tetanus, therefore, we have to deal with a disease which leads to a fatal issue in about three cases out of every four. It has, however, been observed by an examination of a large number of cases that there are certain facts which can afford us some assistance in formulating a prognosis. In all cases there is a definite incubation period between the infliction of the wound and the first appearance of the tetanic spasms, and this period is very rarely less than three or four days, though in a few instances the interval has been less than 24 hours. Indeed, a case has been recorded in which a negro died from tetanus within a quarter of an hour of wounding his hand with a broken plate but it is very doubtful if much reliance can be placed on this striking story. It has been found that, on the whole, the shorter the period of incubation the more likely is the disease to be severe and to end fatally, while if the incubation period be long the probability of recovery is enhanced, and, in fact, when the incubation period exceeds 12 days the attack nearly always proves to be mild. Further, it may be said that the longer the disease has lasted the greater is the probability of recovery; thus POLAND found 51 per cent. of the cases died before the fifth day of the disease, and, in fact, if the patient should survive till the twelfth day of the invasion the chance of recovery is good.

In considering the modern treatment of this disease it will not be necessary to mention all the drugs and the methods; it will suffice if we pass in review those which have attracted the greatest notice owing to the success, or apparent success, which they have attained. Perhaps of all drugs opium has enjoyed the greatest popularity and certainly it can to some extent control the spasms but it will not cure the disease. Morphine, too, has been much employed and especially when administered hypodermically but this method of treatment received a serious set back when a case of tetanus occurred after the hypodermic injection of morphine for another disease. Cannabis indica has had many advocates but the therapeutic efficacy of this drug varies greatly and this fact may in part account for the failure by others to attain the curative results described by those who advised its employment. The Calabar bean theoretically seems to be indicated, for it is almost antagonistic to the action of strychnine and, indeed, it has had many supporters, has been extensively employed, and has achieved no small measure of success, but it certainly fails in many cases. Chloral hydrate has been extensively used and many instances of recovery have been recorded but it fails in just those cases in which we most need therapeutic help. It is often given with bromide of potassium or of ammonium and the combination of these two drugs seems to be, perhaps, more effective than is either separately. Another substance which was at one time much employed in the treatment of tetanus is curare. It was originally used for this purpose by VELLA and it might appear at first sight to be very suitable, for it causes paralysis of the muscles, which in tetanus are in a state of spasm, but a very little consideration will show that, as CLAUDE BERNARD said, "curare may stop the spasms of tetanus, but cannot cure the disease." The poison of tetanus acts, as we know now, certainly on the motor cells of the brain and the spinal cord, while curare just as certainly has been shown by experiment to cause paralysis of the muscles, not by affecting the motor cells of the central nervous system or the nerve trunks but the motor nerve endings in connexion with the muscular fibres. Therefore, from a theoretical standpoint, we should not expect curare to act as a real antidote to the poison of tetanus, but, further, if curare is given in a dose sufficient to stop the spasmodic contractions it will almost certainly affect the respiratory muscles to such an extent as to interfere materially with respiration. It is true that these objections are theoretical and cases have been recorded in which recovery has followed the employment of curare. We published an instance of this method of treatment in THE LANCET of Sept. 17th, p. 831, the case being under the care of Mr. W. J. SYMES in the Chesterfield and North Derbyshire Hospital. In this case recovery followed the hypodermic injection of curare and it is especially to be noticed that the spasms tended to return when the administration of the drug ceased. It is true that previously antitetanic serum had been employed but no improvement seemed to follow. The case is decidedly of interest yet too much stress must not be laid on an individual instance. Nicotine is another powerful substance the employment of which in the course of tetanus has been followed by recovery and HAUGHTON especially commended it but we are not aware of its having been employed within the last 20 years. Chloroform and ether have occasionally been administered; they certainly can control the tetanic convulsions. They are, however, chiefly of use in inducing sleep and in enabling the introduction into the stomach of liquid food by the stomach pump or the nasal tube, so that by enabling food and sleep to be obtained these general anæsthetics assist in maintaining the patient's strength. Carbolic acid is sometimes given and many recorded cases testify to its value but it has often failed.

The treatment by drugs does not comprise all that has been adopted in the therapeutics of tetanus. Surgery has attempted much. Amputation has been performed and our modern pathological knowledge enables us to recognise that this treatment may be successful in some early cases although it not rarely fails. The idea that the poison was conveyed to the nerve centres by the nerves led to the practice of dividing, excising, or stretching the nerves of the affected part and the records of recoveries following each of these

methods might be taken as an indication that they are of use but our previous survey of the therapeutics of tetanus will suggest that the patients might have recovered even had this treatment not been adopted, for the cases in which failure followed are even more numerous. Tracheotomy has been advocated from an entirely mistaken view of the mode of death. Death may result from asphyxia in tetanus, though more commonly it is due to exhaustion; but even if death is produced by asphyxia in this disease there is no spasm of the glottis, no interference with the entry of air; the asphyxia is caused by the tonic spasm of the respiratory muscles, so that all respiratory movement ceases and death necessarily follows. To relieve such a condition tracheotomy can be of no avail. It has been suggested that if a patient suffering from tetanus were bled and then saline solution were infused, much of the poison would be eliminated. In the number of THE LANCET above mentioned three cases were also recorded in which this mode of treatment was employed and two of them recovered but in neither of these was there any history of a wound and such "idiopathic" cases always have a low mortality. The method has nothing to recommend it. So hopeless seems every treatment advised that some have fallen back on simple rest and a few years ago DE RENZI claimed to have obtained four recoveries out of five cases by complete rest and silence. The patient's ears were stuffed with cotton-wool and he spoke not a word. Food was administered by a tube. While disinclined to attribute a very great therapeutic value to quietness and rest yet we think that they are important adjuncts to whatever other method of treatment be adopted, for a sudden noise often starts a spasm.

Our knowledge of the pathology of tetanus tells us that all the phenomena of the disease result from the absorption of a toxin from the wound where the anaerobic bacillus is located. The bacillus never invades the body generally. This toxin attacks the motor cells of the central nervous system and enters into a firm union with them, giving rise to violent contractions of the muscles with which they are connected. The tetanus antitoxin from which great results were expected has hardly fulfilled all that was anticipated from its employment. When brought into contact with the toxin it can, indeed, neutralise it but should the toxin have reached the motor cells the antitoxin is powerless to dissolve the union there formed. All circulating toxin is destroyed but the fixed toxin is beyond its power. The modification of the method of administration by which the antitoxin is injected into the skull is of doubtful value, the risk of the method is great, and satisfactory results are few in number. Yet in spite of its many failures we must depend mainly in the treatment of tetanus on the early administration of the antitoxin but our belief in the value of this serum must not blind us to the immense importance of the surgical treatment of the wound. The tetanus bacillus is entirely localised in the wound and its neighbourhood and therefore it is of the first importance that the wound should be rendered aseptic by excision or scraping, and the application of powerful antiseptics. Even amputation may be advisable in certain cases if seen early. It is true that this careful local surgical treatment will not touch the toxin already absorbed but it will prevent, if thoroughly performed, the absorption of any more toxin. To follow up the quantity already absorbed is the work of the antitetanic serum. To relieve pain and to diminish spasm some of the nerve sedatives already mentioned may reasonably be administered but it is useless to depend on them alone. Lastly, it is important to remember that prophylaxis should never be neglected. All wounds, especially those into which mud and soil have been rubbed, should be carefully cleansed and rendered aseptic by the means at the disposal of the surgeon. In this way the disease should be rendered less common and if a careful observation of such cases is maintained the earliest sign of tetanus might be recognised, so that treatment might be commenced at a time when, as our experience tells us, the chance of destroying the toxin is especially great. So widely spread is the tetanus bacillus that we can hardly hope ever to be able entirely to prevent infection but we may reasonably expect by attention to the means to which we have referred to reduce materially the present large number of fatal cases.

Playing Grounds.

THE *Times* of Sept. 28th contained a well-conceived letter from Mr. LESSER calling attention to the rapid absorption by the speculative builder of land in the vicinity of London and to the consequently ever-increasing difficulty of obtaining ground which could be used for the purpose of outdoor games. The writer did only justice to the action of the London County Council in setting apart portions of some of the open spaces under its control for cricket and football grounds and added what is undeniably true that the demand for pitches in these grounds exceeds the supply and that the players are crowded within very narrow limits. How true this is may be seen by anyone who visits Clapham Common or Brockwell Park during what may be described as recreation time. The pitches are so close, especially those given up to comparatively young children, that the players must often find some difficulty in distinguishing their own balls from those of their neighbours, and it is not uncommon to see a well-fielded cricket ball thrown up to the wrong wicket. Mr. LESSER'S letter was followed by another, from Sir ROBERT HUNTER, the chairman of the Hampstead Heath Extension Society, who points out that the 80 acres of field at Hendon which his society hopes to add to the Heath will afford a large number of pitches, accessible from many parts of London for twopence, and that a sum of £3000 has still to be collected in order to complete the purchase. The Heath itself is in most places too irregular or undulating for games, but the proposed addition is described as admirably suited for them, and we trust that Sir ROBERT HUNTER'S appeal will not be made in vain. Mr. LESSER made the revolutionary suggestion that portions of the Royal parks might be made available for games. He is probably right in supposing that there are portions which could be spared for this purpose without serious present inconvenience to anybody, but their allotment might be a dangerous example of the thin edge of the wedge. The neighbourhood of cricket pitches is often distinctly unsafe for children and pedestrians, as many of those who use the open spaces of the County Council could testify. We ourselves should regret to see the parks or Kensington Gardens diverted from the purposes, we had almost

said the legitimate purposes, to which they have so long been applied. When GEORGE I. asked what it would cost to plough and to cultivate Hyde Park he was told that it would cost three kingdoms; and the feeling in favour of its preservation would probably be quite as strong now as it was in those days. Moreover, the sacrifice would be a useless one.

We have great sympathy with the wants of the classes concerning whom Mr. LESSER and Sir ROBERT HUNTER have written, but these classes only touch the fringe of the subject. It is undoubtedly true that there are many thousands of London children who would benefit by regular recreation in the open air but who have at present no other playground than the streets, courts, and alleys of their immediate neighbourhood. Among these children there would be very few who could afford even Sir ROBERT HUNTER'S twopence, or who could afford it sufficiently often to derive any real benefit from the expenditure; and it is obvious that a playground so distant as to demand a twopenny fare would be quite outside the reach of those who were compelled to walk and who, if they visited it at all, could only do so at the cost of a degree of fatigue which would be prohibitory of games, or would render them more likely to be injurious than to be beneficial. The Hendon fields, and Clapham Common, and Brockwell Park, and even the small open space at Kennington, are admirable for the children living in their vicinity, and are duly appreciated if the numbers frequenting them may be taken as a test. But there are thousands of children who cannot reach them and it is for the physical training of these that provision of some kind should be afforded. The new educational authorities must be made to understand that the brains of children are but parts of their bodies and that their bodies must be cultivated if their brains are to be turned to good account. We may concede at once that nothing is so good for the physical health of the young as to be active in the open air; but, when the best is not attainable, we must strive for the best that can be attained. Nearly all London elementary schools have good playgrounds and the atmosphere in these playgrounds, if not as good as that of the country, is at least better than that of the rooms. If we are to deal at all with tendencies to physical degeneration among the poorest classes we must enforce systematic exercises which will require the chests to be well filled and the muscles to be well exercised; and for these purposes the playground should be as much under the control of the authorities as the class-room, and the lessons taught in the former as much under direction as those taught in the latter. In this way we may at least do something both to detect the earliest signs of physical degeneration and to arrest its progress when it appears; and we shall also prepare our pupils for the proper use and enjoyment of the open spaces if ever they are able to obtain access to them. Carefully conducted drilling and gymnastic training would, we believe, be of far more value to the poorest class of children than aimless "exercise," even in a better atmosphere, for it is certain that mere "games," as such, pursued without any particular teaching, have very little influence upon bodily development. We shall be heartily glad to see the multiplication of playgrounds in accessible situations, but we believe that with playgrounds, as with other things, it is quite possible to miss advantages from want of knowledge of the best methods of securing them.

Mr. LESSER, we are glad to see, does not advocate games for the half-starved. "The half-starved child belonging to the lowest stratum of the urban population must," he says, "be properly fed before it is in a fit state to benefit by physical recreation at all." He therefore dismisses this class from his consideration and only appeals for playgrounds for those who can afford to reach them and "pending the gradual removal of such evils as overcrowded homes, badly-chosen and badly-cooked food, and the other obstacles in the way of healthy physical development." The reservation serves chiefly to display the enormous complication of the subject and the difficulties that stand in the way of dealing with it successfully.

Annotations.

"Ne quid nimis."

THE SALE OF FOOD AND DRUGS ACT.

ACCORDING to the thirty-third annual report of the Local Government Board just issued the total number of samples analysed under the Sale of Food and Drugs Act during the official year 1903 was 78,077. This shows an increase of 5756 samples over the figures of the previous year. In spite of this further activity on the part of the authorities the return showed a smaller percentage of adulterated samples than in the previous year. In 1902 8·7 per cent. of the total samples analysed proved to be adulterated while in 1903 the percentage adulterated was 7·9. There was, however, an increase in the amount of adulterated samples of cocoa but a slight diminution in the number of samples of adulterated milk. We are glad to find that the Local Government Board has again urged upon several local authorities the desirability of increasing the number of samples taken for analysis. There are yet several districts in which the rate of sampling does not exceed 1 per 1000. The samples taken in every metropolitan borough exceeded 2 per 1000 of the population. London is at the head of the list again as regards the extent of adulteration of milk, the result showing 13·5 per cent. of samples condemned as against 10·7 per cent. in provincial towns and 8·5 per cent. in the country. There is little doubt that the adulteration of milk does not take place to any large extent in the country and the inference is that the water is added by the milk dealer in London. It is satisfactory to know that the fines imposed show an increase in individual cases though still in many instances the amounts inflicted are not calculated to check adulteration as effectually as larger sums would do. Penalties were mposed in 2777 cases, amounting in the aggregate to over £6000, excluding costs in most instances. The percentage of adulterated samples of drugs showed a trifling increase over that recorded in the previous year. Seidlitz powders continue to be adulterated to the extent of one-fifth of the samples procured for analysis. The percentage of spirits reported against in 1903 was 11·8 which, it is interesting to remark, is the lowest on record since the passing of the Act of 1875. The adulteration refers, however, only to the addition of water. In the next report we may expect to find the percentage of spirits reported against to be higher since proceedings are now taken against the sale of brandy adulterated with silent spirit. It is pointed out in the report that in the case of a large number of watered samples obtained

from licensed houses prosecutions cannot effectively be instituted on account of the common practice of exhibiting notices in the bars of such houses stating that all spirits sold in the establishment are diluted. Similar notices are now exhibited stating that the brandy sold cannot be guaranteed as consisting entirely of grape spirit. This method of evading the provisions of the Act should be overcome in some way and a publican should be summarily dealt with who refuses to supply a standard article. Of 769 samples of beer examined 17 were condemned on account of the presence of arsenic. But it is satisfactory to find that, according to the report of the analyst of Lancashire, the traces of arsenic which were still found in beer in 1902 owing to imperfect cleansing of the malt have now almost entirely disappeared "and beer in the county is now purer than it has probably been during the greater part of last century." It is obvious that steady consistent work is being done under the operation of the Sale of Food and Drugs Act and it is satisfactory to find that the public analysts are carrying out their share of the work as efficiently as the provisions of the Act enable them to do.

THE METROPOLITAN WATER-SUPPLY.

FROM the reports by Mr. C. Perrin (the examiner under the Metropolis Water Act, 1871) and Dr. T. E. Thorpe (the analyst) respectively, which are summarised in the annual report of the Local Government Board, it would appear that the year 1903 was unfavourable for the operations of the companies supplying water from the Thames and Lee owing to the continuous wet weather of the summer and autumn months. The water of the Thames was in good condition during 243 days but moderately discoloured and turbid during 52 days, whilst it was exceptionally muddy and turbid on 70 days of the year. The effect of floods and of the want of proper storage is shown in the increased amount of organic matter indicated in Dr. Thorpe's analyses. On several occasions it was evident that the companies were distributing water of unsatisfactory quality. Taking as a standard the mean amount of organic impurity in the Thames water delivered in 1868, a standard represented by the figure 1000, Dr. Thorpe states that in 1903 the figures for the Thames and Lee respectively were 1293 and 936 as compared with 822 and 558 in 1902. The mean proportion of organic matter in the Kent companies' water referred to the same standard was in 1903 only 215. These figures as compared with the figures for the preceding year indicate a marked inferiority of quality in the year's supply from both the Thames and the Lee. Similarly unsatisfactory results, it is remarked, have not been recorded for the Thames-derived water since 1872 or since 1880 for water derived from the Lee. The organic matter present is to a relatively large extent of vegetable origin. Very properly Dr. Thorpe draws attention to the importance of storage reservoirs, especially when the rivers are in bad condition. This view is abundantly supported by the fact that in the year 1903 the companies which possessed reservoirs of the greatest storage capacity delivered on the whole the best water. In spite, however, of the increased storage accommodation recently provided it is still obviously insufficient to cope with the exceptional conditions occasioned by frequent floods. As an indication of the heavy strain to which the companies' filters were subjected during a period of flood the waters delivered by three companies were then distinctly opalescent. The wet year 1903 has, in fact, conveyed many useful lessons on the question of the quality of the water-supply of London and Dr. Thorpe states that it has been possible to gain more definite information on this important subject in a single twelvemonth than could have been obtained by observations extending over many ordinary years. It is doubtful whether the health of London can be considered to be protected efficiently from water-borne disease so long as there is a liability to continuously wet seasons, while at the same time no provision is made for increased storage accommodation which such conditions demand. The experience of the year 1903 has at any rate led Dr. Thorpe to the following conclusions. 1. That from 16 to 18 days' storage is not sufficient and that it should be increased so that the several works could, if necessary, entirely exclude the river for at least 15 days and still have water available for some weeks' supply. 2. That all water ought regularly to be stored before use and that storage should not be treated, as it is at present in some cases, as a mere reserve or stand-by. 3. That when the river is in flood the proportion of soluble organic impurity in the water is always high and that merely excluding the top of a flood will not insure a supply which, even after storage and filtration, can be considered satisfactory in regard to colour and organic purity. 4. That when one flood follows another after a short interval of time it does not appear that the second flood brings down proportionally less organic impurity than the first and this observation is also generally true with regard to a succession of floods. 5. That if the best use could be made of the Thames as a source of supply in order to secure water which after storage and filtration should neither contain excessive amounts of organic matter nor have a marked high colour it would often be necessary to refrain altogether from abstracting water when the "natural flow" at Teddington exceeded 2,000,000,000 gallons per day. 6. That in order to remedy the present state of affairs it is very desirable that the Staines reservoirs, already constructed, should without delay be called into regular and systematic use. In a word, the health of London in relation to its water-supply is dependent upon both adequate storage and efficient filtration, and it is to be hoped that the new Metropolitan Water Board will see that these vital provisions are made secure.

MOTOR VEHICLES AND THE PUBLIC ROADS.

WHEN we wrote in a leading article on the above subject in THE LANCET of Sept. 24th, p. 900, that in prosecutions of motorists too much stress is laid on the actual pace of locomotion and too little on the exigencies of the roads in use, we referred to the fact that the majority of cases in the police-courts turn upon the question of the 20 miles per hour limit and not upon the question of whether the driving is of a reckless and dangerous character owing to the circumstances in which it is performed. The speed of a motor-car is one of the elements of its usefulness but as we observed in another passage the average motorist is a man of leisure, by whom speed is adopted for the pleasure and excitement to be derived from it, and he is too apt to underrate its inherent danger. In a letter published in the *Times* of Sept. 24th Lord Russell introduced the following paragraph which is characteristic of the mental attitude of many other drivers of motor-cars. He writes: "As to speed, the opposition to speed is entirely based on ignorance. A modern motor-car at 30 miles per hour on a main road is safer and more under control than the ordinary horse and trap going at eight miles per hour. The speed of a passing car is also very frequently exaggerated." The element of safety introduced by the mechanical perfection of the car diminishes, but does not nullify, the danger caused by its pace. The maximum rate of speed allowed by law is 20 miles per hour—that is to say, 1760 yards in 180 seconds, or a trifle less than ten yards per second—so that the motor-car which, in the language of "sprinters," "does level time," slightly exceeds the statutory pace. It may well be that a car going 20 miles per hour can be stopped in 20 yards more completely and more surely than a horse

trotting at ten miles per hour, but the motorist confronted by a sudden obstacle 20 yards in front of him will have two seconds wherein to do what is needed and the driver of the horse in a like case will have four. In this we assume that the object to be avoided is inanimate or can do nothing to compass its own safety. If, however, it is alive and is endowed with a certain amount of intelligence, whether it be a dog, a child, an adult foot-passenger, or the driver of another vehicle, the horse will give it twice as much time as the motor-car wherein to make up its mind and to put its resolution into force. If we revert to Lord Russell's figures the case against the motor-car is stronger still and in every fifth part of a second during which his chauffeur fails to observe or hesitates to act his car will shorten by three yards the distance between it and the point of danger. In estimating, moreover, the causes of the motor-car's unpopularity we must remember that most people, if it were their fate to be run down and if they could have their choice of evils, would prefer the horsed vehicle to the motor-car, even apart from their respective speeds of 30 miles per hour and eight. Whether the speed of motor-cars is exaggerated or not can be estimated very fairly by anyone who owns a watch with a second hand. He has only to stand still watch in hand when he sees a car coming at all rapidly towards him, keep his eyes on his watch as it goes by, and note the spot which it has reached ten or 20 seconds after it has passed him. If he then paces in the same direction 100 or 200 yards, according to the period he has selected, he will possibly not have made as scientifically exact an observation as motorists seem to desire in the witnesses against them, but he may also have formed the opinion that no such high pitch of accuracy is necessary. He need not make his experiments in unfrequented main roads. He will find food for them in urban and suburban thoroughfares where the sudden excursion of a child into the roadway or the approach of a second vehicle at a blind corner is an incident that may occur at any moment.

STUDIES FROM THE DEPARTMENT OF NEUROLOGY OF CORNELL UNIVERSITY.

THE custom of publishing annual or periodical records of scientific work carried out in the pathological laboratories attached to universities in the United States of America has been a noteworthy and increasing feature in American medical literature during the last few years. The Department of Neurology of the Cornell University, which is under the direction of Professor Charles Dana, has issued its first volume of "Studies." It includes clinical and pathological researches completed in the department during the year 1904, much of which is published in the present volume for the first time. Among the contributors we note he names of Professor Dana, Dr. Ramsay Hunt, Dr. Joseph Fraenkel, and other well-known workers in neurology. The range of subjects treated is wide and the matters dealt with are important clinically, pathologically, and therapeutically. Several of the papers are contributed by Professor Dana himself, and amongst those are four which deal respectively with special exercises for tabes dorsalis, the "formal" treatment of epilepsy, special exercises for aphasia, and special exercises for Parkinson's disease. Experience after a good many years, says Professor Dana, sometimes brings us to definite methods of treating certain diseases. Thus in acute rheumatism there is a rather uniform agreement as to diet, local application, and internal medication. The methods of treatment in tabes dorsalis, migraine, and chorea are fairly well fixed and the special objects to be obtained may be said to be established. "When such a stage in therapeutics is reached we possess what I would call a 'formal' or conventional method, this being the plan arrived at after long experience by many competent observers and producing very uniform results." It is now agreed that the best treatment of the average epileptic is that furnished by a farm colony life. Thus under the headings of Regulation of Daily Life, Exercise and Bathing, Diet, Removal of Reflex Causes, and Medication Professor Dana details his scheme of the formal treatment of epilepsy. Exercises for tabes are to be taken, he says, twice a day. Ten different series of gymnastic movements of graduated difficulty are prescribed for the hands and arms and twelve for the lower limbs and body. When these are mastered, supplementary exercises are added for improving co-ordination and skill of movements of the hands and fingers. The systems of exercise for Parkinson's disease and for aphasia as described in the book are practical and have proved of benefit in Professor Dana's practice. "The trouble in aphasia is not paralysis of the organs of articulation," he says, "but a lesion destroying the centres for the memory and ideas of language; hence the education should be one of memory rather than of muscular training of the articulatory organs. The exercises should therefore be such as will tend to stimulate and to revive these memories through every possible agency." The patient will often have to practise his exercises constantly for two or three years and the progress at first will be very slow. The exercises consist of repeating exclamatory words, monosyllabic words, letters of the alphabet and figures, after which attempts to read daily a paragraph or part of a page should be attempted. Copy-books should be filled up for practice in handwriting daily. The patient should allow himself to be read to for a short time twice a day and he should also try himself to read a quarter of a page every day. Many other papers of interest are included in the present work. Dr. Ramsay Hunt treats of tumour of the frontal lobe of the brain, tuberculosis and tuberculous myelitis, neuro-fibromatosis, and the pathology of paramyoclonus multiplex or Friedreich's disease. The modern subject of cytodiagnosis in nervous disease is treated conjointly by Professor Dana and Dr. F. W. Hastings. Though yet in its infancy this method has already given valuable results in diagnosis and the operation of withdrawal of cerebro-spinal fluid by the method of lumbar puncture, although liable to give rise to disagreeable after-effects in the form of headache, is unattended with serious symptoms or sequelæ. In a paper dealing with the cerebro-spinal fluid Dr. Fraenkel discusses the special subject of lymphocytosis. A more or less marked increase of leucocytes was found to occur in tabes dorsalis, in general paralysis of the insane, in syphilis of the central nervous system, and in multiple sclerosis, the total number of cases investigated by Dr. Fraenkel being 47. From a purely chemical standpoint as well as from the morphological, he says, much yet remains to be investigated in regard to the cerebro-spinal fluid. The first volume of "Studies" of the Department of Neurology of Cornell University is a credit to Professor Dana and his colleagues and must add to the advancement of neurological science in America.

GUARDIANS AND THEIR MEDICAL OFFICERS.

IT is, unfortunately, often our lot to have to point out the devious ways which boards of guardians follow in their dealings with medical officers and we return to the charge with some faint hope that we may eventually see signs of improvement in this respect. Our attention has been directed by a correspondent to two of the conditions said to be laid down by the guardians of the St. George's (Hanover-square) Union in regard to the appointment of a medical superintendent for their infirmary. These conditions, which are to be subscribed to by intending applicants, are, as stated by our correspondent, as follows: 1. He will be required to attend without extra fee any of the indoor

staff at the infirmary, workhouse, and children's home who may be sick *and report thereon to the guardians if required.* (The italics are ours.) 2. For every alleged lunatic examined by order of a justice of the peace the officer shall accept a fee not exceeding 10*s.* 6*d.* per case. It will be seen that two important issues are here raised—(*a*) the right of guardians to compel a medical man in their employ to divulge information which he has obtained in his professional capacity; and (*b*) the power of control which guardians can exercise over a magistrate in his administration of the lunacy laws. Our English law relating to professional secrecy is not laid down so explicitly as in France, for example, and its exposition here would occupy far too much of our space but it appears to us that any applicant for the post under the St. George's board who signs such an undertaking as is given above will, if he observes it, lay himself open to legal proceedings of an embarrassing character. As to the second condition we may point out, as we have several times done before, that Section 285 of the Lunacy Act of 1890, which deals with the fees payable to medical men for the examination of alleged lunatics, gives to boards of guardians no right whatever to dictate to a justice what is to be regarded as a suitable fee for certifying cases. The stipulation appears to us to be an improper one and it can only be rendered effective by bringing the cases before a magistrate who will forfeit his freedom of action in deference to the wishes of the board. We presume that if the magistrate makes an order for the payment of a guinea, as has been, we believe, the practice at St. George's and elsewhere, the officer appointed will have to hand over half the amount to the board's exchequer. If, on the other hand, the justice should for any reason direct a smaller sum than half a guinea to be paid the guardians would have no power, even if they had the will, to increase the amount to that sum. As between the guardians and their medical officer the case is therefore one of "heads we win, tails you lose," and we trust that this aspect of the matter will be appreciated by any intending applicants.

A CASE OF QUINTUPLETS.

THE birth of quintuplets is one of the curiosities of medical literature. In the *Journal of Obstetrics and Gynecology of the British Empire* Professor G. C. Nijhoff of Groningen (Netherlands) has recorded the following case in which he examined the placenta. The account of the labour is furnished by Dr. de Blécourt who attended the woman in confinement. The mother was a robust woman, aged 34 years, and had been married for eight years. She had been delivered seven years before at term of a boy. The last period terminated on Jan. 20th, 1903. At the beginning of May there was a discharge of a small quantity of yellow fluid, at times tinged with blood. This ceased but returned in the beginning of July. Quickening was first felt early in June. On July 10th severe pains recurring every three minutes began at 8 A.M. At the height of the pains the bag of membranes was visible at the vulva. The fundus uteri was a hand's breadth above the umbilicus. Fœtal heart sounds were heard on both sides and in the middle of the abdomen. Vaginal examination showed the os completely distended and a small fœtal head in the first position. At 8.30, soon after the rupture of the membranes, an immature but living female child was born. Ten minutes later a second female in footling presentation followed. At 9 a male was born in vertex presentation and was soon followed by a female in footling presentation. Dr. de Blécourt was then surprised to find a fifth child concealed in a corner of the uterus and presenting transversely. Some minutes later a female was born in footling presentation. Before the birth of the fourth and fifth children no bag of waters was observed. The five children were all alive but survived for only one hour. At 9.30 the placenta was expelled after moderate pressure on the uterus. During the labour, and especially after the expulsion of the placenta, there was considerable hæmorrhage. The puerperium was practically normal. The children were of the development of six months and their weights ranged from 500 to 750 grammes. There was a single oval placenta measuring 18·5 by 25 centimetres and weighing 890 grammes. The uterine surface presented no more than the usual lobules. The five cords were inserted into distinct amniotic sacs. Three fœtuses were in one chorion and the remaining two were in separate chorla. As the cords varied in thickness, shape, and arrangement of vessels it was not difficult to connect each fœtus with its own cord. The three sacs inclosed in a common chorion corresponded to the first, second, and fifth fœtuses. Thus these arose from one ovum and the other two from separate ova. It is of interest that the three fœtuses which arose from one ovum were of the same sex, while those that arose from separate ova were of different sexes. This would seem to support the view that the sex is predetermined in the ovum before fecundation, i.e., that there are male and female ova. Uniovular twins are always of the same sex. Therefore the quintuplets arose from three ova. In the woman's family several cases of multiple pregnancy had occurred. Her mother once had twins. Two uncles were the fathers of twins and an aunt was delivered of triplets. Professor Nijhoff refers to another Dutch case of quintuplets which occurred in 1719 and he has collected 27 cases from obstetrical literature between the years 1694 and 1900. The case recorded above may be instructively compared with one of quadruplets reported last week in our columns.[1] The fœtuses appeared to be of six and a half months development. Unlike the present case, each had a separate chorion and had therefore developed from one ovum.

A CENTRAL HOSPITAL BOARD FOR BRIGHTON.

AT an influential meeting recently held in Brighton it was resolved to unite for administrative purposes under a central board the various local hospitals—namely, those of Brighton and Hove and the Sussex County Hospital. There are seven such institutions in the district. Some are special hospitals and some are not but the lines of demarcation between their several spheres of activity are not precisely drawn and there is in consequence a good deal of overlapping. It has been felt for some time past that an endeavour should be made to classify and to distribute the work which falls to them so as to reduce expenditure while increasing efficiency. After several months of careful investigation and conference not limited to those immediately interested the Mayor of Brighton and his helpers have been able to set before the public meeting already referred to a basis for united action. The result is the adoption in principle of the central board. It is not intended that this body shall concern itself with the internal management of any hospital. It will act rather as an advisory committee and its expressed objects are: (1) to obviate overlapping of local medical charities; (2) to promote economy of administration, particularly in connexion with capital outlay on buildings; and (3) to prevent the abuse of medical charities by persons who are not proper objects of charitable assistance. As bearing upon the advantages to be expected from such an arrangement as the above the following facts are instructive. At the beginning of the year the Women's Hospital issued an appeal for a sum of £20,000 to build a new gynæcological department. After some deliberation with the local authorities and others it was decided to convert the wards

[1] THE LANCET, Oct. 8th, p. 1020.

of the Sussex County Hospital devoted to children's diseases into a section for diseases of women and to transfer the children to the existing Children's Hospital. It is pointed out that the effects of redistribution in this case are the development of the Women's Hospital as a maternity institution, increased bed accommodation being available for this purpose, the parallel development of the Children's Hospital, the formation of an independent gynæcological department, and a saving of £20,000. Centralisation after this model has much to recommend it. It has thus far been shown to be inexpensive. It allows of autonomy, the comparative lack of which has proved fatal to less elastic systems. It owes its adoption to the support of all the medical charities which it is intended to serve, a recognition of its disinterested character. We shall watch its further progress with attention and we may express the hope that success in the place of its origin will justify its extension to other populous areas.

A CASE OF EMPYEMA COMPLICATED BY AN ŒSOPHAGEAL FISTULA INTO THE PLEURA.

A CASE of some interest and considerable rarity is recorded by Dr. Alexander Jehle in the *Wiener Medicinische Wochenschrift*, No. 22, 1904. The patient was a child, aged two and a half years, who six weeks previously had suffered from a right-sided pneumonia. About ten days before admission into the Wilhelmina Hospital at Vienna the child developed fever, followed by emaciation and œdema of the lower extremities, but at no time was colic, hæmatemesis, or vomiting observed. On admission the pulse and temperature were normal and there were œdema of the feet and ankles and some degree of emaciation. Physical examination of the chest showed dulness with weak bronchial breathing on the right side, while the heart was displaced towards the left, the sounds being normal. Exploratory puncture proved the presence of pus from which a pure culture of the pneumococcus was obtained on bacteriological examination. The pleura was incised in the fifth intercostal space in the posterior axillary line and a considerable quantity of thick greenish-yellow odourless pus was evacuated. The course of the case was at first quite satisfactory, the œdema disappeared by the third day, the patient rapidly improved, and the empyema cavity became smaller, but about three weeks later the pus which escaped acquired a sour, pungent odour and contained small cheesy masses like curdled milk. This first suggested the presence of an œsophageal fistula, which was confirmed by the discovery of seeds in the pus escaping from the drainage-tube after their administration by the mouth, although fluid given by the mouth did not apparently escape into the pleura. The empyema continued to clear up and the œsophageal fistula closed for a time but later small particles of food were again found in the pus and this condition recurred at intervals for about four months, after which the œsophageal fistula closed permanently and the empyema operation wound healed shortly after, since which time the child had remained quite healthy. The explanation put forward by Dr. Jehle is that the communication between the œsophagus and the pleura was due to a mediastinal gland infected by the pneumococcus at the time of the pneumonia breaking down simultaneously into the pleura and the œsophagus and not to direct invasion of the œsophagus by the empyema, which he regards as negatived by the interval which elapsed between the opening of the empyema and the development of the fistula and by the narrowness of the track which only at times allowed food material to pass and even then in such small quantities as frequently to be recognisable only by chemical or microscopical examination. For treatment he recommends washing out the pleura with non-toxic solutions to clear away the escaped food materials, while the thoracic wound is to be kept open until the œsophageal fistula is closed. Invasion of the pleura by disease of the œsophagus is well known to occur and empyema and pneumothorax resulting from malignant disease of the œsophagus may be quoted as examples, but involvement of the œsophagus from the pleura is certainly a much more rare event notwithstanding Dr. Jehle's suggestion that such cases may occur more frequently than they are recognised.

CENTENARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE opening meeting of the centenary session of the Royal Medical and Chirurgical Society will be held at the Society's rooms, 20, Hanover-square, London, W., on Tuesday, Oct. 25th, at 8.30 P.M. The two following papers will be read—viz., the Pathology and Prevention of Secondary Parotitis, by Mr. Rupert T. H. Bucknall, and Symptomatic Parotitis, by Mr. B. N. Tebbs, and it is anticipated that there will be an exceptionally interesting discussion. The society always welcomes the presence of visitors who are invited to take part in the discussions. Persons intending to be present will recieve abstracts of the papers on application to the secretary, 20, Hanover-square, W. In many ways the society is showing that it is actuated by a progressive spirit. Formerly, even though a paper was received and approved for reading and read at a meeting of the society, it might not be considered worthy of a place in the Transactions and publication in any journal of any paper before the issue of the Transactions was prohibited. Wiser counsels have prevailed and at the present time all papers accepted for reading are published in the Transactions and authors are at liberty to publish their papers in medical or scientific periodicals immediately after they are read. On May 22nd, 1905, the centenary of the society will be celebrated and at the present time a committee is considering the arrangements for this celebration.

SIR ISAMBARD OWEN.

Sir Isambard Owen has been unanimously appointed principal of Armstrong College in the University of Durham in place of the late Dr. Gurney. Sir Isambard Owen, who entered upon the performance of his new duties on Oct. 8th, is well known in London, for he has till quite recently been physician and lecturer on the principles and practice of physic at St. George's Hospital. He is, moreover, a Vice-Dean of the Faculty of Medicine of the University of London and an examiner in medicine for the Royal Army Medical Corps. He rendered yeoman service in the formation of the University of Wales and is at the present moment the senior deputy chancellor of that body. The great experience which he possesses in educational questions renders it peculiarly fitting that he should have been selected to be the principal of an institution such as Armstrong College and the city of Newcastle, together with the University of Durham, is to be congratulated upon having obtained the services of so able a principal for one of their foremost educational institutes.

THE BRITISH MEDICAL BENEVOLENT FUND.

IN a letter published in the *Times* of Sept. 30th Sir William Broadbent states that the British Medical Benevolent Fund is suffering considerably by reason of the prevailing financial depression and that the sum available for the relief of aged or invalided medical men and of widows and children left unprovided for is quite inadequate. He truly says that for a large proportion of medical men it is impossible to save much out of their earnings and if they die early, which is very common, their widows and children may be left on the border of destitution. The fund gives 120 annuities

to disabled medical men and their widows or unmarried daughters over the age of 60 years and these are provided for by investments, but it also attempts to relieve the distress which may become acute at an earlier age through illness or bereavement and tries to help in the maintenance of children left unprovided for. At the committee meeting in July there were 23 applications for help but the fund already owed £70 and it was impossible to do anything; in September the number had risen to 34 and with a balance of £37 in hand the committee made grants of £97 to the most urgent cases. Subscriptions and donations may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, London, W.; or to Sir William Broadbent, 84, Brook-street, London, W.

THE DISCHARGE OF SEWER GASES INTO THE STREETS.

IT is a loathsome aspect of our system of sewerage that the gases in the sewers are allowed to escape into the street. To what an extent this discharge of disgusting exhalations is a contributory factor to the vitiation of the air is made very obvious in cold weather when a continuous flow of vapour may be witnessed proceeding from the gratings in the middle of the road. In warm weather the discharge still goes on and though it is not evident to the eye gives strong offence to the sense of smell. We are glad that the medical officer of health of the City of London has drawn attention to this matter in a recent report presented to the sanitary committee. Numerous complaints of nuisance arising from ventilating openings in the roadway in connexion with main sewers in the City under the control of the London County Council have been made during the warm weather. With a view of mitigating the evil the Council has adopted the practice of sprinkling these openings with a strong smelling and highly coloured disinfectant. While this method certainly indicates that something has been done to allay any uneasiness in the public mind we quite agree with Dr. W. Collingridge that it clearly is no real remedy. This recourse has simply the effect, to quote the forcible expression which he uses, of "adding one stink to another" while disfiguring the public thoroughfare in an objectionable manner. Surely in the interests of public health and common decency some practical method of improving the ventilation of the sewers could be devised. The nuisance is by no means a local one but occurs throughout miles and miles of London streets.

CONVALESCENT HOMES FOR WORKPEOPLE.

A PUBLIC meeting of workpeople was held in Manchester on the evening of Oct. 5th in support of the movement for establishing convalescent homes for the workpeople of Manchester, Salford, and district. A million penny fund has been started, and it is proposed to hold a bazaar towards the end of next year which it is hoped will raise £10,000. The scheme is to found self-supporting homes on the lines that have proved successful in Birmingham and Leeds. After the first cost the home would be maintained by the subscriptions of the working people. For a subscription of a penny a week a man and his wife would be entitled to go to the home after sickness or in case of a threatened breakdown. In Birmingham £18,000 a year are subscribed for the maintenance of three homes, two of them being between Llandudno and Conway. Leeds contributes £12,000 for two homes. In both cases any surplus is handed over to the hospitals. Manchester does not compare well with either of them, having only subscribed £8000 a year to the Hospital Saturday and Sunday Funds. It was decided to start a handicraft section among workpeople in anticipation of the bazaar. It is not encouraging and looks as if the workpeople, who are always helped, were apathetic as to helping themselves when we learn that, including several gentlemen interested in the movement, there were only about 100 present at the meeting.

PRESENTATION TO M. HENRI HUCHARD.

WE have just received a pamphlet entitled "Hommage à M. H. Huchard." This contains a full account of the speeches delivered at the Hôpital Necker in Paris on July 21st, when M. Huchard was presented with a medal commemorating the completion of 30 years of strenuous medical work, clinical, educational, and journalistic. The presentation coincided in point of time with M. Huchard's promotion to the rank of Officer of the Legion of Honour and took place in presence of a large assemblage, several of whom, as well as M. Huchard himself, have visited London during the present week.

ACUTE CHOLECYSTITIS.

ACUTE cholecystitis was described by Potain as long ago as 1882 as a rare and rapidly fatal disease but only a few cases have been recorded subsequently. It probably is not so rare as has been supposed and is frequently undiagnosed. In the *American Journal of the Medical Sciences* for September Dr. John G. Sheldon has reported four cases. In one case a man, aged 29 years, was seized with a severe chill about midnight on June 15th, 1901, and soon began to suffer from paroxysmal pain in the abdomen which was most intense in the pit of the stomach and radiated into the right scapular region. He also vomited. On examination at 4 A.M. he was found in a state of shock. The pulse was 110, there was no fever, the tongue was coated, and the abdomen was slightly distended and tender. The region of the gall-bladder was extremely tender. The right rectus was more tense than the left. Three-eighths of a grain of morphine and $\frac{1}{150}$th of a grain of atropine were injected hypodermically but gave little relief. At 8 A.M. the temperature was 101° F. and the pulse was 110. At 9 he was examined under ether. The gall-bladder could not be felt or any enlargement of the liver made out. An incision was made along the outer border of the right rectus muscle beginning at the costal arch. The omentum, colon, and gall-bladder were matted together. When the gall-bladder was freed it was found to be slightly enlarged, tense, and of a very dark colour. The vermiform appendix was brought into the wound and as it showed evidence of chronic inflammation it was removed. The gall-bladder was surrounded with gauze, aspirated, sutured to the transversalis fascia, and opened. It contained very dark thick bile and its mucosa was injected and œdematous. The gall-bladder was drained. The bile yielded a short bacillus which stained with methylene blue. Recovery was uneventful. In another case a woman, aged 36 years, complained of violent paroxysmal pain in the pit of the stomach about 11 P.M. and had a severe chill. She vomited several times. A quarter of a grain of morphine was injected every hour. One and one-quarter grains were given before she was relieved. She then slept for six hours. When she awoke the pain returned but was less severe. After 36 hours the paroxysms ceased and she complained only of dull and continuous pain. The temperature ranged from 101° to 103° F. When Dr. Sheldon saw the patient, 72 hours after the onset, the abdomen was distended, rigid, and tender. The region of the gall-bladder was more sensitive than the other parts of the abdomen. There was a leucocytosis of 22,000. The urine was scanty and contained much albumin. The liver dulness was slightly increased. An incision over the gall-bladder showed that that organ was enlarged, distended, and very dark. There was general suppurative peritonitis. Aspiration showed that the gall-bladder contained pus. It was attached to the abdominal wall and opened. The

abdomen was drained through the posterior wall. Death from peritonitis occurred 48 hours after the operation. The diagnosis of acute cholecystitis is based on the sudden onset, the characteristic pain, the fever, and the local tenderness. Gangrene of the gall-bladder should be suspected if the pain and tenderness cease or diminish markedly while the general symptoms become more severe. As to treatment, Dr. Sheldon recommends cholecystotomy and, if the gall-bladder is gangrenous, cholecystectomy. If the patient declines operation the stomach should be washed out, rectal feeding resorted to, and morphine given. Cathartics should be avoided.

A PROVINCIAL sessional meeting of the Sanitary Institute will be held at the Municipal Offices, Southampton, on Oct. 29th at 11 A.M., when a discussion will take place on Infectious Fever Hospitals. Tickets for admission of visitors may be had on application to Mr. James Lemon, F.R.I.B.A., M.Inst.C.E., Lanslowne House, Castle-lane, Southampton, who is acting as the local honorary secretary of the meeting; and of Mr. E. White Wallis, secretary of the institute, Parkes Museum, Margaret-street, London, W.

ON the recommendation of the Secretary of State for the Home Department Dr. H. B. Donkin, one of H.M. Commissioners of Prisons, has been appointed a member of the Royal Commission on Uncertified Mental Incapables. In our issue of Sept. 17th, p. 838, we pointed out that there was only one medical member of the Commission and we urged the desirability of strengthening the Commission in this respect. We are glad to see that our counsel has been followed.

THE opening meeting of the session 1904–05 of the Chelsea Clinical Society will be held at the Chelsea Dispensary, Manor-street, King's-road, on Tuesday, Oct. 18th, at 8.30 P.M. Some introductory remarks will be made by the president, Dr. T. Vincent Dickinson.

THE annual dinner of the Association of Public Vaccinators of England and Wales, as we announced some time since, will be held in the Hotel Cecil, London, on Friday, Oct. 28th, at 7 P.M.; Mr. E. Climson Greenwood, the president of the association, will take the chair.

THE winter session of the Students' Society of the Medical School of Leeds will be opened on Tuesday afternoon, Oct. 18th, at 4 o'clock, by an address given by Mr. Edmund Owen, consulting surgeon to St. Mary's Hospital, London.

THE annual dinner of the Society of Anæsthetists will take place on Friday, Oct. 21st, at the Imperial Restaurant, Regent-street, London, W. The President of the society, Mr. C. Carter Braine, will be in the chair.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on March 15th, 1905, at 7 P.M.

AN anonymous donor has given £1000 towards the funds of University College, Bristol.

DIPHTHERIA AT BARNSTAPLE.—Diphtheria has recently broken out at Westleigh in the Barnstaple rural district and about 20 cases have occurred. The Barnstaple rural district council has fitted up a temporary isolation hospital in the village.

EXETER HOSPITAL SATURDAY FUND.—At the meeting of the committee of the Exeter Hospital Saturday Fund held on Oct. 7th it was reported that the recent Hospital Saturday collection resulted in a sum of £408 being raised, and after deducting expenses £330 have been distributed to the local medical charities.

THE EVOLUTION OF MAN'S DIET.

BY HARRY CAMPBELL, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE NORTH-WEST LONDON HOSPITAL AND TO THE HOSPITAL FOR NERVOUS DISEASES, WELBECK-STREET.

V.[1]

THE HOMO-SIMIAN AND PRE-COCTURAL HUNTING PERIODS.

IT will be convenient to take these two periods together. The first extends from the anthropoid stage to the beginning of the hunting and fishing period, which we have placed at the 10th grade; the second, from the beginning of the hunting and fishing period to the discovery of cookery, which we have supposed to date from the attainment of the 11·5th grade of evolution. Thus, according to this reckoning, the two periods extend from the 5th to the 11·5th grade—i.e., from the late miocene to the early pliocene epoch, a period which we may roughly estimate as lasting 1,000,000 years, during which time the cranial capacity of the evolving man was increasing from 500 cubic centimetres to 1150 cubic centimetres and his brain adding some 650 cubic centimetres to its volume. We have seen that probably quite early in the homo-simian stage our precursors migrated from the narrow confines of their cradle-land and that by the time they had reached the 10th grade they probably constituted a homogeneous species which occupied the greater part of the Indo-African continent, at that time presenting throughout its length and breadth a fairly uniform climate; further, that although through the vast period during which this continent was inhabited by the homo-simians a certain degree of migration of individual groups took place, leading to that constant inter-breeding without which the homogeneity of the species could not have been maintained, the life led was essentially non-nomadic, and that much the same share in procuring the food was taken by each sex; but that when the hunting period was reached this comparatively stationary life gave way to a nomad existence, the men devoting themselves to hunting and fishing while the task of gathering the vegetable food, already during homo-simian times gradually relegated more and more to the female section of the community, aided by the old males and the young family, now fell almost exclusively to them; and, finally, that at this stage man, owing to his invention of the means of hunting and fishing, began to spread far and wide over the world into regions which, before he became a genuine hunter and fisher, would not have afforded him the necessary means of subsistence.

The hunting and fishing period began when the evolving being, now raised to the dignity of manhood, learnt to fashion weapons and to contrive devices for procuring game and fish, genuine hunting and fishing being impossible without such artificial aids. It would be interesting, did space allow, to trace the evolution of the various inventions which enabled man to become a skilled huntsman and fisherman. We can picture the early homo-simians hurling stones and wielding the unfashioned branches of trees after the manner of the baboon and at a later stage fashioning these latter into clubs, tomahawks, and spears; later, again, tipping the spears with flint, bone, or shell; and finally inventing more elaborate weapons, such as the spear-thrower, boomerang, blow-pipe, bolas, and bow and arrow. This last weapon was used for hunting and fighting by the ancestors of all civilised peoples before the introduction of firearms, and it is to this day in use among all the surviving pre-cibiculturists, with the single exception of the Australian aborigines. The possibility of its having been known to, and since discarded by, the ancestors of these people must not, of course, be lost sight of, though there is no known instance of a primitive hunting people having abandoned this silent and deadly weapon once acquired. It looks very much as though the bow and arrow had not been invented, or at all events as if it were not generally in use, when the first aborigines immigrated into Australia. Now we shall see in due course that these early immigrants must have taken with them into Australia an elaborate system of cookery, a system so elaborate as to indicate that long before

[1] Nos. I., II., III., and IV. were published in THE LANCET of Sept. 10th (p. 781), 17th (p. 848), 24th (p. 909), and Oct. 1st (p. 967), 1904, respectively.

their immigration man had learnt to cook his food; and from this we infer incidentally that the discovery of the bow and arrow considerably post-dated that of cookery.

It will help us to realise the conditions under which our precursors lived just before the hunting period if we imagine a small party of us—having by some miraculous agency lost all knowledge of the arts, even that of kindling fire—to be transported to some uninhabited part of the world, entirely shut off from our fellow beings. Given such conditions we should have to rely solely upon mother wit for subsistence: having neither knives nor axes wherewith to fashion hunting weapons and no knowledge of the way to make lines or nets we could neither hunt nor fish and should be compelled to subsist upon wild roots, seeds, and fruits, while for animal food we should have to be content with insects, grubs, eggs, snails, lizards, and the like. In course of time our descendants would learn to fashion flint knives and hatchets and to make hunting weapons and fishing tackle, when the hunting stage would be entered upon and the supply of animal food considerably augmented. By thus, in imagination, placing ourselves in the position of those far-off ancestors we shall the better realise how much of our present enlightenment depends upon knowledge handed down from generation to generation and how comparatively little upon individual initiative.

Seeing that during the whole of the homo-simian and early hunting periods the food of the evolving man consisted of the natural products of the animal and vegetable kingdom—i.e., products unmodified by artificial means—one might be tempted to ask whether the diet could have undergone any great change during these periods—whether, in fact, except in being more animalised, the food of the huntsman just before he learned to cook differed greatly from that of the early homo-simian, and the question gathers force from the circumstance that the diet of the present-day pre-cibiculturists, in spite of their having attained to considerable refinement in cookery, presents certain striking resemblances to that of existing anthropoids, both the one and the other subsisting on insects, grubs, caterpillars, small reptiles, *et hoc genus omne*, and having not a few vegetable foods in common. That, however, the diet did actually change during the homo-simian and early hunting periods there can be no doubt, not only becoming more animalised but changing considerably in respect of the vegetable portion. These changes are to be explained by reference to the three great factors on which, as we have seen, the food of a species depends, and the influence of these on the diet of the evolving man during the periods under consideration must now engage our attention.

1. The influence of *the kind of food available* was felt chiefly in respect of vegetable food. During the long homo-simian period between the fifth and the tenth grades, when our precursors were in all probability limited to the Indo-African continent, the climate, slow though this is to alter, had ample opportunity of undergoing changes and this would lead to changes in vegetation and thus in the kind of vegetable food available. Again, when at the hunting-stage man began to spread over the entire habitable globe he was brought into relation with widely varying floras and this circumstance must have further tended to modify his vegetable food. At this time, too, sections of the race came to inhabit comparatively barren regions yielding a scanty supply of vegetable food and they were thus compelled to subsist mainly on the products of the chase. Indeed, it was, as we have seen, the discovery of the means of hunting which enabled man to spread from regions luxuriant in vegetation to lands which could not otherwise have supplied the necessary sustenance.

The influence of (2) *natural promptings* and of (3) the *mental and physical equipment* needful to give effect to those promptings may be taken together. The prompting of the evolving man being to get his food in as concentrated, digestible, and palatable a form as possible, his diet became, with increasing intelligence and skill, more and more animalised. One can understand how the homo-simian thus came to be more and more adept in procuring insects, grubs, eggs, small birds, lizards, mice, and the like, until with the help of weapons, traps, and dogs he was able to hunt the larger game and by means of various devices to fish the lakes and the streams. In this way the evolving man greatly increased his supply of animal food. No longer wholly dependent for it upon such small things as insects, grubs, mice, and lizards, which individually yield an insignificant supply of nutriment, the huntsman was able by destroying a single large animal to secure at a stroke an abundance of the animal food he craved, while the fisherman was often able to obtain a good supply of large fish such as salmon. Hence during the hunting and fishing period man became more carnivorous than vegetarian. Then it was that he developed to the full the instinct "to go and kill something" which, though called less and less into play with each succeeding diet epoch, yet breaks out at times even to this day with something like its pristine force, whether in the vagrant midnight poacher or in the multi-millionaire. Had it not been for the discovery of cooking and the introduction of agriculture, by means of which enormous quantities of highly nutritious and easily digestible vegetable foods were produced, there can be little doubt that man would to this day be mainly carnivorous

Whether fish entered into the dietary of the homo-simians it is impossible to say. Fresh water shell-fish have probably been consumed from very early times since they can be procured without much difficulty. The first fish caught were probably those of the fresh-water streams and lakes rather than the salt water varieties, but without the use of artificial devices, such as the damming up of streams, netting, and spearing, they could not be procured in any substantial quantity, and therefore one may assume that fish did not enter to an appreciable extent into the diet of our ancestors until the hunting period. Many rivers—e.g., those of North America—abound in salmon, and the tribes living in their neighbourhood have doubtless from the beginning of the hunting period feasted upon this dainty fish. Salt-water fish, it must be remembered, cannot be obtained in any quantity without the aid of some sort of sea craft, be it only a raft or a primitive canoe, and without artificial means, such as those afforded by lines, spears, and nets; and from what we know of the backwardness in respect of seacraft of certain primitive peoples still existing, it seems doubtful whether man engaged in deep-sea fishing much before the coctural period. He did not, in fact, venture upon the deep or learn to make nets until within comparatively recent times. Shell-fish found on the seashore, on the other hand, have entered into his dietary for long ages, possibly even into that of his homo-simian and anthropoid precursors, for we have seen that some of the monkeys subsist on crustacea and molluscs. The existence in various parts of the world of kitchen middens, made up chiefly of shells, shows how very largely the inhabitants of the sea-coast have subsisted on shell-fish in prehistoric times, and to this day they constitute a very acceptable form of food to the majority of mankind. It must not be supposed that with the large accession of animal food which came with the hunting and fishing period the smaller kinds of animals were wholly abandoned as food, for even the surviving pre-cibiculturists continue to consume insects (such as ants, spiders, grasshoppers, and beetles), caterpillars, grubs (as from decayed wood), ants' eggs, snails, lizards, frogs, snakes, birds' eggs, nestlings, and the smaller mammals, and these doubtless entered into the dietary of both the homo-simian and the early hunting man, as probably did also turtles and crustacea in certain districts. With the steady diminution in the vegetable diet which took place during the homo-simian and early hunting periods the coarser and less palatable varieties were naturally abandoned first. Most of the saccharides entered the stomach in the soluble form, either as the products of buccal digestion—dextrines and maltose—or as grape sugar, fruit sugar, or cane sugar—met with in fruits and honey. Gum was probably also consumed.

The preparation of vegetable food in precoctural times.—Whether precoctural man prepared his vegetable food in any way can only be matter of surmise. Did he, e.g., like his successors of the next period, extract from such articles as acorns and manioc their bitter and poisonous principles? One can well believe it possible, seeing that the method of doing this by maceration does not require any great ingenuity and that it would greatly increase his food-supply. Or did he perchance, like some primitive peoples now living, dry in the sun and pulverise any of his vegetable foods and thus save the work of his masticatory organs? This, again, does not seem unlikely, for it is a remarkable fact that although man in the early coctural period generally makes the flour he prepares from wild roots and seeds into cakes or puddings, he sometimes eats it raw. Or, again, had he discovered that the digestibility of some vegetable substances may be greatly increased by allowing them to decompose underground? It seems improbable that with the great intelligence which

man of the later precoctural period must have possessed he should not have subjected his vegetable food to some sort of preparation. He must have noticed the effect of crushing seeds between stones, of exposing vegetable substances to the sun, and of soaking them in water—all this a 15th grade child would soon find out for himself. Indeed, just as the cookery of food led the way to agriculture, so it seems highly probable that the preparation of it by sun-drying, grinding, maceration, and similar processes led the way to the actual cooking of it—that man passed, in fact, through a primitive food preparation period before he entered on the period of cookery.

(To be continued.)

CHOLERA AND PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

THE following notes are in continuation of my letter which appeared in THE LANCET of Sept. 24th, p. 913.

No known case of cholera has occurred in Basra since August 19th. That port was declared free of the disease on Sept. 8th and the measures in force against it elsewhere were removed from that date. At Bagdad the epidemic reached its maximum in the week ending Sept. 3rd and has since declined, as shown by the following figures:—

From August	21st	to August	27th	...	180	cases	...	133	deaths.
,,	,,	28th ,,	Sept.	3rd	... 271	,,	...	174	,,
,,	Sept.	4th ,,	,,	10th	... 212	,,	...	127	,,
,,	,,	11th ,,	,,	17th	... 166	,,	...	120	,,
,,	,,	18th ,,	,,	24th	... 61	,,	...	36	,,

The disease still remains epidemic, to a greater or less extent, at Mendelli, Kiazmieh, Amara, Hay, and other places along the lower reaches of the Tigris and Euphrates. It has recently shown a tendency to spread backwards up both these rivers. Up the Tigris it has not yet been reported further north than Mossul, where an epidemic of some severity has occurred. The following are the returns from Mossul since the first known cases on August 20th:—

On August	20th	...	...	...	...	...	2	cases ...	1 death
From August	21st	to August	25th	...	13	,,	...	14	deaths
,,	,,	25th ,,	Sept.	2nd	... 45	,,	...	44	,,
,,	Sept.	3rd ,,	,,	7th	... 68	,,	...	53	,,
,,	,,	8th ,,	,,	14th	... 162	,,	...	104	,,
,,	,,	15th ,,	,,	23rd	... 57	,,	...	52	,,

Outbreaks of less severity have occurred in the Mossul vilayet at Bazian and at Keui-Sanjak, near the Persian frontier.

Up the Euphrates cholera has recently spread as far as Deir-Zor, the chief town of an independent *sanjak* of the same name. This town is of importance as the principal halting-place for caravans between Aleppo, Mossul, and Bagdad; it is about nine days' ride from Aleppo. There were 13 cases of the disease here and six deaths between Sept. 13th and 15th, and 37 cases with 21 deaths between the 16th and the 24th. This outbreak to some extent threatens a reappearance of cholera in the Aleppo vilayet, which is believed to have been quite free from the disease—with the exception of one or two isolated cases in January and February—since last year. At Khanikin, the Turkish frontier station on the Turco-Persian frontier, occasional cases continue to occur. But generally throughout the infected area of the Turkish provinces cholera is now declining. The total numbers of cases and deaths reported from all parts in the week ending Sept. 26th were only 312 and 230 respectively, as compared with 621 cases and 414 deaths in the preceding week.

On the Persian side of the frontier, also, the cholera epidemic appears to be subsiding but the news received from that country is both scanty and contradictory. Thus the Ottoman sanitary delegate at Tehran telegraphed on August 30th that the cholera had ceased in that city and was causing only isolated cases in other Persian towns. But on the same date the Ottoman embassy at Tehran reported that four or five deaths from cholera were still occurring there daily. The latter added that from seven to eight deaths were occurring weekly at Hamadan and that the disease had appeared at Sineh (? Sihna). Cholera, it will be recalled, was present in Sihna at the end of June; of its behaviour there since nothing is known. The statement concerning Hamadan, moreover, is in contradiction with a telegraphic report received from the Ottoman consul at Kermanshah, then on a visit to Khanikin, on August 31st. This telegram was as follows: "No trace of cholera remains in the neighbourhoods of Hamadan, Beran, Djeran, Sultanabad, and Nehavend, and for the last week neither cases nor deaths have occurred at Kermanshah and neighbourhood." On Sept. 14th, however, the same authority reported that the disease had reappeared in the last-named town and had caused 33 deaths there in six days; and on the 23rd he further reported the occurrence of 18 deaths between the 13th and the 20th of the month.

On Sept. 13th the Ottoman Consul-General at Tiflis telegraphed that cholera had broken out at Tabriz and Maragha, both in the north-west angle of Persia and near to the Transcaucasian frontier. At Enzeli, on the Caspian, according to Russian official reports, five deaths from cholera occurred before August 21st (8th). The same reports state that the disease had been severely epidemic at Kerbalet and that all pilgrimages had been prohibited in Persia. The Russian delegate also informed the Ottoman Board of Health on Sept. 6th that cholera was present in sporadic form at Resht, Astrabad, and Meshed.

Equal uncertainty prevails as to the extent of the cholera outbreaks in Transcaspia. From communications made officially to the Ottoman Board of Health it appears that Merv has been somewhat severely visited by the disease. A statement quoted from the Russian *Official Messenger* of Sept. 11th (August 29th) affirms that cholera was imported to Merv by a sotnia of Cossacks coming from Kaachka, close to the Persian frontier, and that the disease had been introduced there by refugees from Meshed. It will be recalled that in 1892 cholera was introduced to Russian territory by exactly the same route and in exactly the same manner. The date of the first cases in either Kaachka or Merv is not stated, but up to August 24th (11th) as many as 53 cases with nine deaths had occurred in the garrison of Merv and 13 cases with nine deaths among the general population. No information has since been received here as to the further progress of this outbreak.

On Sept. 13th the Ottoman consul at Tiflis telegraphed that cholera had reappeared at Baku, two cases and one death having occurred there on the 9th (August 27th, Old Style). On the 16th two more cases, both fatal, were reported and on the 21st news was received of two deaths between the 16th and the 18th and one fresh case on the 20th. Between the 20th and 24th three cases, with one death, occurred, bringing the total number of known cases in Baku to eight. So far as is known at present cholera has not spread in the Caucasus outside Baku but the Russian authorities are taking active measures to meet an eventual extension of the disease in the Caucasus and up the Volga.

From other unofficial sources it may be gathered that the outbreak in Transcaspia is even more extensive than the above figures would indicate. The *Russkii Vratch* states that the Russian Plague Commission has announced that in the week ending Sept. 4th (August 22nd) 62 cases of cholera and 43 deaths occurred there and in the following week 77 cases and 48 deaths, and that 36 Turcomans died from the disease in the *auuls* around Hassankuli, on the shores of the Caspian between the 4th and the 11th of the month. The number of cases could not be stated, as the Turcomans were hiding the sick. The majority of the cases in the Transcaspian province had occurred in Merv and at Bairam-Ali, near Merv. The disease is also present in Tchikishliar, on the Caspian.

Five cases of plague have recently occurred in Smyrna and this small outbreak presents some points of interest. The first patient fell ill on Sept. 2nd and was first seen on the 5th. He was a Jewish boy employed in a grocer's shop; the case was proved bacteriologically to be one of plague; the boy is recovering. The second case was that of a Moslem man employed in the Custom House. He fell ill on the 5th and was first seen on the 8th; he died on the 9th; plague bacilli were demonstrated in the contents of the bubo after death. A few dead rats had been seen in the Custom House some 15 or 20 days before his attack, but there is nothing to show that this was an exceptional occurrence or that the rats died from plague. The third case was that of a Moslem dock-labourer who was taken ill on the 8th and was not seen by the sanitary authorities until the 14th. He died

on the 16th; plague bacilli were demonstrated microscopically in the contents of the bubo. A doubtful case with some of the clinical symptoms of plague occurred in a diabetic subject on the 21st, but as microscopically, culturally, and by the inoculation of guinea-pigs plague bacilli could not be discovered in the bubo contents this case is not regarded as one of plague. The fourth case of plague was that of a Bosniac boy who had come to Smyrna from Kassaba three weeks before his attack. He was taken ill on the 20th and admitted to the Turkish Civil Hospital the same day. He died there on the 24th; a microscopical examination of the bubo contents after death showed plague bacilli. The fifth case was that of a Greek carter who was taken ill on the 21st and first seen on the 24th. Microscopical evidence was also obtained of the presence of plague bacilli in the bubo.

The source of infection in these cases is not known. It is noteworthy that isolated cases of plague occurred at Smyrna in September and in December, 1901; in January and in September, 1902; and in September and in December, 1903. This is therefore the fourth year in succession in which plague has appeared in this port in the month of September. Whether on each occasion the infection is freshly imported or whether there is some seasonal variation in the life-history of rats or in the kind of goods or passengers arriving at Smyrna to account for this curious fact there are at present no data to hand to determine.

A report was recently received to the effect that a disease believed to be plague was prevailing in the neighbourhood of Hamadan, in Persia, but this report has not been confirmed and is believed in Tehran to be unfounded.

No further information has been received as to the progress of the cholera outbreak in the Nejd province and on the Arabian shores of the Persian Gulf.

Constantinople, Sept. 30th.

PS.—Since writing the above news has been received from Baku showing that cholera is now rather seriously epidemic there. A telegram of Sept. 28th states that between the 24th and the 26th 41 cases and 29 deaths from the disease occurred there.

MEDICINE AND THE LAW.

A Criminal of Questionable Sanity.

A CASE recently heard by Mr. Garrett at the South-Western police-court seems to be one of those which are incomplete without careful inquiry into the mental condition of the person charged. The accused man was proved beyond all doubt to have committed acts of gross indecency before women walking through Battersea Park between eight and nine o'clock in the morning on their way to work. This conduct he had repeated so that, owing to complaints made, he was watched and handed over to the police. In consequence of a denial of this accusation made on his behalf, which put his character in issue, evidence was given that he had been engaged to teach music to two young girls and that his disgusting conduct towards them had caused him forcibly to be ejected from their father's house; that he had been employed in the office of the town clerk of Battersea until a day when three female attendants there had simultaneously complained of his abominable behaviour and he had been ordered to leave at once; that he had written in a filthy manner to a young girl inclosing obscene drawings; and that many other complaints of his conduct to women and girls besides those given in detail had been made. Mr. Garrett sentenced him to four months' imprisonment but his repeated acts were perpetrated in circumstances in which moral depravity seems hardly to account for them and in which complaint and punishment were alike so inevitable that his mental condition must have been at least open to question.

The Power to Recognise and to Identify.

In an annotation in THE LANCET of August 6th, p. 387, reference was made to the accurate memory for faces and personal peculiarities shown by a medical school attendant at St. Thomas's Hospital and to the development of this gift in porters at hospitals, clubs, and other institutions in which care has to be taken that only members are admitted. The inaccuracy of some others who claim to identify those with whom they have been slightly acquainted was commented upon and illustrated from the case of Mr. Adolf Beck. Another example of the inaccuracy of women in this respect was shown at the Clerkenwell police-court on Oct. 8th, when a woman positively identified as her husband an omnibus driver who, she swore, had married her in 1884 and deserted her after living with her for more than a year. Since the desertion she had seen her husband in 1896. She produced his photograph in uniform and his discharge from the army. The defendant swore that he was not the woman's husband and that he had never been in the army and corroborative evidence by his relatives showed that, unless the whole of their testimony was perjured, it was impossible that he could have married her as she stated. According to the magistrate the photograph, which must have been 20 years old, to some extent resembled the accused, which shows how little reliance can be placed in photographs as evidence. An independent circumstance corroborated the defendant and his relatives, for in the discharge of the complainant's husband from the army it was recorded that his height was then 5 feet 5¼ inches. He was not likely to have grown since and the defendant measured 5 feet 8 inches. Two and three-quarter inches constitute a difference between the heights of two men which any observant person could hardly overlook, but a mistake by a woman as to a husband with whom she has cohabited for more than a year seems at first sight extraordinary. This may have been the magistrate's opinion, for he did not dismiss the case but advised the woman to withdraw her summons for desertion. It will be remembered, however, that a few months ago it was proved against a prisoner who had personated a medical man that he had induced the wife to cohabit with him and that she had done so believing him to be her husband who had left her shortly after marriage. In another recent instance resembling that at Clerkenwell Sir Edward Fry and a bench of Somersetshire magistrates had a clear *alibi* proved before them when a man was called upon to show cause why he should not contribute to his wife's support. She was an elderly woman who had been married to her husband in 1873 and had lived with him for ten years but since 1888 she had not even seen him. There was a physical peculiarity in the roof of the mouth of the defendant which her husband had had but in addition to other evidence which made it impossible that he could be the right man it was shown that had the wife's story been correct he would have been married to her when he was only 12 years of age.

Garbage-mongers Fined.

At Marylebone police-court on Oct. 8th George Pearce pleaded guilty to being the owner of certain bacon exposed for sale upon a stall and another man, Mumford by name, pleaded guilty to having it in his possession for sale. The former was fined £5 with 23*s.* costs, with the alternative in default of distress of one month's imprisonment; the latter was fined £2 with 23*s.* costs, or in default of distress was ordered to undergo 21 days' imprisonment. The circumstances narrated by Mr. Ricketts for the prosecution distinguished the case from others of the same kind, owing to the determination of the defendants to carry on a traffic very dangerous to the public until actually prevented. Pearce had no shop in Marylebone but was tenant of a warehouse for some time suspected by the sanitary authorities of being a storehouse for unsound food. It was watched but the detectives were noticed and the bacon in question was removed at night. Some of it was afterwards traced to a stable and other portions to the stall where it was seized. In view of the efforts made by these men to palm off their putrid goods upon their unhappy customers unless absolutely stopped by detection and active intervention the penalties inflicted by Mr. Curtis Bennett do not appear to err on the side of severity.

ROYAL PHOTOGRAPHIC SOCIETY.—At the Royal Photographic Society's forty-ninth annual exhibition, now in progress at the New Gallery in Regent-street, London, W., Mr. C. Thurstan Holland of Liverpool shows a very interesting series of radiographs of bone diseases for which he receives the society's medal. The pictures very clearly present the growths attendant upon exostosis, periostitis, necrosis, sarcoma, and osteoma principally of the leg bones. Dr. G. H. Rodman also contributes some instructive radiographs of the mollusca which demonstrate the value of the x rays in the study of the internal anatomy of shells. In addition to the above, there are some interesting photo-micrographs and exhibits of scientific interest which will appeal to those of our readers who can pay a visit to the exhibition.

SEA-SICKNESS AND THE ATLANTIC PASSAGE.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Boston, Mass., U.S.A., Sept. 30th.

BEFORE attempting to describe some of the sanitary services on this side of the Atlantic perhaps a few words as to the means available to cross the vast and turbulent ocean may be appropriate. A curious evolution is taking place. Many years ago, the *Great Eastern* having proved a failure, only comparatively speaking small ships were built. To-day, however, larger and still larger ships are being produced. At the same time a reaction is taking place against excessive speed. Everybody is not in a desperate hurry and many prefer to give an extra day so as to travel in much greater comfort. Thus the Cunard Company have three ships—the *Carpathia*, which has no saloon passengers, and the *Saxonia* and *Ivernia*, each having more than 200 first-class state-room berths. The peculiarity of these three ships is, first, their immense size—namely, a little over 14,000 tons; secondly, they do not profess to cross the Atlantic in less than seven and a half days; but, thirdly, what with their double keel, their size, and general build, they do profess to be so steady that the chances of sea-sickness are reduced to a minimum. This statement is made publicly and in advertisements passengers who are bad sailors are advised to travel by these ships. The prevention of sea-sickness has always been a matter of great and practical interest. There is no doubt that the intercourse between nations would be more frequent and intimate than it is but for the fear of sea-sickness. This, therefore, was an opportunity not to be lost, so I took a passage on board the *Ivernia* which is considered to be one of the largest and steadiest of ships afloat. Of its size there can be no doubt. We had 186 first-class and 232 second-class passengers. Then there were 1877 steerage passengers, and adding the crew to these figures there was a grand total of 2584 persons on board, so that we could be compared, not to a floating hotel, but to a small town sailing across the seas. What, then, would happen with such a crowd if there should be tempestuous weather, and would there be less misery and suffering on board the *Ivernia* than is generally the case in such circumstances? The weather proved propitious, not to the passengers, but to my desire of investigation.

We started on Sept. 13th at 4.30 P.M. from Liverpool and did not get abeam of the Boston lightship till 8.37 P.M. on Sept. 21st. No sooner did we advance well forward in the Irish Channel than, as a sailor remarked, we fell in with the tail end of the gale that had wrought much havoc in the British Channel from Dover all round the southern coasts. So rough was it that at Queenstown the tenders could not come out to us and we had to go into the harbour. We had gales and head winds and rough seas during the first four days after leaving Queenstown and the severity of the weather may be judged by the fact that on one day we only made 298 miles, whilst our best record during this journey was 387 miles. It will thus be seen that the weather was severe enough to constitute a good test in regard to the question of sea-sickness. What then happened? In answer it may as well at once be confessed that there is no such thing as the absolute prevention of sea-sickness. Its frequency may be very considerably reduced, as also the number of victims, but given a gale in the Atlantic there is no ship conceivable that could remain without rolling or pitching when buffeted by such gigantic waves. Indeed, the most that can be hoped for is that it may not both roll and pitch at one and the same time. During the first days the *Ivernia* contented itself with pitching but ultimately it rolled as well. From Tuesday night to the following Monday morning we had tempestuous weather and at the dinner table there were ugly gaps made by the many vacant seats. Personally I have suffered terribly from sea-sickness in my younger days but am now becoming a fairly good sailor. In any case I did not miss a meal and had I eaten as much on shore as I ate at sea I should have been very ill indeed. This is the more noteworthy as I had crossed a few days previously from Ostend to Dover. There was no storm or gale but it was a nasty rough sea and many passengers were ill; consequently I did not enjoy my lunch on board. Though I was not ill, still I felt somewhat disturbed, but the point is that I was more inconvenienced during those few hours on the Channel than during four days of storms and gales on the Atlantic. This is no new experience. Many people have crossed the Atlantic without suffering and yet have been terribly sick in the short journey from Dover to Calais. The choppy nature of the Channel seas and the smallness of the boats result in jerks and leaps, together with simultaneous rolling and pitching, so that the passengers are churned up, and this is indeed difficult to endure. In a big transatlantic steamer the movement is more deliberate and regular. The question, however, is whether among transatlantic ships such vessels as the *Ivernia* give better results so far as steadiness and freedom from sea-sickness are concerned. In this respect I would say that rough weather, especially with head winds, must be hard to bear for the steerage passengers even on the *Ivernia*. Their deck is the first to be swept by the heavy seas. They are driven into their closely packed quarters below deck where many are vomiting in all directions, so that those who otherwise might have escaped sickness are rendered ill by the sights that surround them and the sour odours with which they are assailed. No amount of care in ventilating can altogether prevent this. But the second-class and first-class passengers are safe on the upper promenade decks. Indeed, there is excitement in watching the storm and this mental diversion, together with the bracing effects of the fresh strong wind, is an excellent preventive. Here I found several passengers who had fled from unfinished breakfasts but who quickly recovered when watching the waves leap on the fore part of the ship.

It was indeed a grand sight and all the more impressive when the force of the wind had blown the clouds away, so that the sun shone brightly on the creamy white foam with its ultramarine background of dark glossy sea. On several occasions quite a large party assembled on the fore part of the upper deck and beyond the canvas that is put up to shelter the promenade. Here, at the risk of an occasional douche of spray, we watched, and some attempted to photograph, the huge clouds of foam and spray and the solid but transparent blue sheets of water that occasionally leapt up, spread out, closed over and engulfed the prow of the ship. How to get a snapshot at this explosion of water and yet keep the lens dry was the principal problem. Then there was the difficulty of telling at what moment this great display would occur. It often happened that the ship rode successfully the most menacing of waves. It seemed wonderful to see this huge structure dip right down into the trough of the sea. The prow then appeared so far away and so far down. Yet it would come up again and rise above as high as it had been low down. Occasionally this part of the ship seemed to be wiped out altogether as a huge wave dashed up and broke over, greeted by wild shouts of delight and admiration. Here was the chance for a snapshot. It afforded all the hazard and excitement of sport and none of its cruelty. This made us forget the gale and its threats which were not pleasant, even if involving no greater disaster than sea-sickness.

The ship, in spite of its seaworthiness and huge size, both pitched and rolled, yet this was quite endurable, at least when compared to the cross-Channel motion. The movements of the *Ivernia* were solemn and dignified. We were swayed about but we were not flung about. The vibration caused by the engines never ceased but we had no sudden jerks. When very big waves came the ship gave a great heave but there was no sudden shock. We had the honour of rising high to ride huge mountainous Atlantic rollers; but even when gliding down on the other side of these watery elevations we did not experience that peculiar cold sensation in the abdominal region which in the Channel has such prompt and disastrous effect. Not even 14,000 tons of ship structure will remain still when the Atlantic is really rough, but the movement experienced is more endurable, a smaller proportion of passengers are ill, and the intensity of suffering is less. Where, however, the most marked advantage is experienced is during a moderate sea. Then it is that the ship does not roll at all. On these occasions several ships of 3000 and even 5000 tons passed us. They were rolling and pitching in a manner that must have made susceptible people on board very ill, but the *Ivernia* glided on with stately demeanour and the smaller waves then prevailing utterly failed to produce any impression on her. Thus it may be said that as the days of no wind or of slight or moderate wind constitute the large majority of the days of

the year even persons very susceptible to sea-sickness have a fair prospect of being able to cross the Atlantic with little or no inconvenience if they sail in a ship similar to the *Ivernia*. As a proof of the steadiness of the ship even in rough weather I found that the Jew steerage passengers were able to shave each other when standing on the deck. The weather was rough at the time and the ship swayed about a good deal, especially at the extreme end, which is given over to the Jewish passengers and situated near the propellers. But the movement was so regular that not only did these men shave each other without accident but I was able to photograph them in the act.

Steerage passengers shaving one another.

This, I take it, is a good demonstration of the steadiness of the ship. If to this is added the careful ventilation of the cabins so as to keep the air as fresh as possible it will be seen that something has been accomplished to lessen the frequency of sea-sickness. This ventilation does not depend merely on numerous apertures and air shafts, but a great number of electric fans are employed to pump the air in or out of the state cabins and also of the steerage. Altogether, therefore, I feel that the inconvenience of crossing the Atlantic during stormy weather is to a large extent overcome and that there is a distinct advantage in taking the slower, larger, and steadier boats.

MEDICAL SCHOOL DINNERS.

King's College Hospital.—The old students' dinner was held at the Hotel Cecil on Oct. 4th, Dr. Urban Pritchard being in the chair. It was largely attended, over 100 guests being present. Among those who attended were the Rev. A. C. Headlam, principal of the College, Sir John Cockburn and Dr. T. Buzzard, representing the Council of the College, the greater number of the members of the present staff, and a large number of old students representing various years, some going back to quite remote periods. The toast list was commendably short, so there was plenty of opportunity for that renewal of old acquaintanceship which constitutes the principal *raison d'être* for these gatherings. The toast of "The King" being duly honoured, the chairman proceeded to the toast of the evening, which was "King's College and King's College Hospital." The changes contemplated in the removal of the hospital to Camberwell were naturally uppermost in the minds of all present and allusions were made to the very admirable address on that subject which Dr. Buzzard had given earlier in the day at the College in his introductory address. The toast was responded to by the principal of the College. The toast of "The Chairman," proposed in a very happy speech by Mr. F. Richardson Cross, concluded the formal business of the evening, but the chairman, in thanking those present for the way in which the toast had been received, proposed the health of Dr. Norman Dalton who had been for many years secretary of the dinner committee and who was now retiring from that position. This was drunk with musical honours and elicited a brief speech of thanks from Dr. Dalton. The arrangements for the dinner were all admirably carried out and those present will be able to look back on the evening with most pleasurable recollections.

The London Hospital.—The winter session of the Medical College was inaugurated by a dinner held in the library of the college on Oct. 3rd. A large gathering, including many members of the staff, was presided over by Dr. Percy Kidd. In proposing the toast of the evening Dr. Kidd referred to the great progress which the new buildings of the hospital had made during the past year and expressed the obligations of all "London" men to the untiring activity of the house committee. He was glad to report a very satisfactory entry of new students. During the past year the number of successes of "London" students at the universities and Royal Colleges had been unusually high; these included four gold medals and two scholarships at the University of London. In athletics the "London" had had the most successful year on record and the hospital at present held no fewer than 11 of the challenge cups and shields offered for competition among the hospitals of London. Dr. Kidd mentioned the movement on foot to present Mr. Munro Scott, Warden of the London Hospital Medical College, with his portrait in oils as an acknowledgment of his completion of 25 years' devoted service to the hospital and college. He believed this proposal would meet with the warmest approval of all past and present London Hospital students. Dr. Kidd concluded with a touching tribute to the memory of the late Dr. T. Gilbart-Smith whose sudden death had come as such a sad surprise.

St. Bartholomew's Hospital.—The annual dinner took place on Oct. 3rd in the great hall of the hospital. Dr. Samuel West occupied the chair and 151 persons were present. Dr. West proposed the toasts of "The King," "The Prince of Wales" (the president of the hospital), and "St. Bartholomew's Hospital Medical School." The senior almoner present, Mr. Davis, replied. The toast of "The Guests" was proposed by Mr. H. T. Butlin and responded to by Sir Ernest Flower, M.P., honorary secretary of the Appeal Fund, Sir A. W. Rücker, F.R.S., principal of the University of London, and the Dean of Christchurch, Oxford. Sir Dyce Duckworth proposed the health of the chairman who afterwards proposed the usual vote of thanks to the honorary secretary of the dinner, Dr. W. P. Herringham.

St. George's Hospital.—The annual dinner of this school was held on Oct. 1st at the Whitehall Rooms of the Hôtel Métropole, Dr. William Ewart being in the chair. About 114 past and present students were present and the guests included Professor A. Macalister, F.R.S., of Cambridge, who in the afternoon delivered the introductory lecture. Mr. Francis Jaffrey, the Dean, alluded to the successes gained by St. George's students. Mr. H. B. Drake and Mr. Matson obtained the first place in the examinations for the Indian Medical Service in January and August in this year, while Mr. S. H. Byam was placed first on the list for the Medical Service of the Army. Mr. Clinton T. Dent had been appointed chief surgeon to the Metropolitan Police and the Order of the Saviour had been conferred upon Sir William Bennett, K.C.V.O., by the King of Greece. The entries at the medical school were more numerous than had been the case for some years past. The health of the new Director-General of the Medical Department of the Navy, Inspector-General Mackay Ellis, an old St. George's man, was warmly received, as was also the name of Dr. E. A. Wilson, who was one of the surgeons on board the *Discovery*. A very successful and enjoyable evening was experienced by those present.

St. Thomas's Hospital.—The old students' dinner was held at the Hotel Cecil on Oct. 1st, Mr. George E. Wherry of Cambridge being in the chair. The students and members of the hospital staff present numbered 144. After the usual loyal toasts the chairman proposed the toast of "The Hospital and Medical School." In a short speech he gave his recollections of the hospital in the days when it was temporarily located in the Surrey Gardens and of the opening of the new buildings by Queen Victoria in 1871. The treasurer, Mr. J. G. Wainwright, replied on behalf of the hospital and gave an account of the extensive alterations which are in progress at present or are in contemplation in the near future. The new nursing home was rendered necessary by the fact that the hospital originally provided for only 90 nurses and now 176 were required for the ordinary

work of the hospital, and if other schemes came into effect these numbers would be still further increased. Extensive alterations were in contemplation in the out-patient and other parts of the hospital so that a very large sum, £136,000, was involved in these new works. He appealed to all old St. Thomas's men to use their influence on behalf of their old hospital so as to obtain assistance for it at a time when large outlays were being incurred. It was especially gratifying to the governors that Sir John Simon had remembered his old hospital in his will. The dean, Mr. J. H. Fisher, in speaking on behalf of the medical school, gave a *résumé* of the events of the past academical year. He mentioned the retirement of Dr. C. J. Cullingworth and of Mr. F. C. Abbott from the staff and the appointment of Mr. E. M. Corner as assistant surgeon and of Mr. H. J. Marriage to the ear department. He also referred to the honours obtained during the past year which included the gold medal at the London M.B. examination and the Murchison medal, and alluded to the athletic record of the school. The health of the chairman was proposed by Dr. J. F. Payne and drunk with musical honours. The chairman briefly replied and the proceedings terminated after a very pleasant evening.

University College, London.—The annual dinner of the past and present students in the Faculty of Medicine was held at the Hotel Cecil on Oct. 3rd. The chair was taken by Mr. John Tweedy, President of the Royal College of Surgeons of England. There was an excellent attendance, covers being laid for upwards of 120 guests, including Mr. Christopher Heath, Sir William Gowers, Dr. H. Charlton Bastian, Dr. Gregory Foster (principal of the College), Dr. F. T. Roberts, Mr. A. E. J. Barker, Mr. R. J. Godlee, Sir Victor Horsley, Dr. H. R. Spencer, Dr. Norman Collie, F.R.S., Mr. Harry Littlewood, Dr. S. H. C. Martin (dean of the faculty), and Dr. Tempest Anderson. The chairman, in proposing the toast of "The King," paid high tribute to the interest which His Majesty took in the welfare of the hospitals of London and in the Royal Colleges of Physicians of London and Surgeons of England, of both of which corporations he is a Honorary Fellow. Mr. Littlewood proposed the toast of "The Medical Faculty of University College, London, and University College Hospital" and referred to the high traditions of the school as established by the efforts of its distinguished teachers, amongst whom the names of Sir William Jenner, Sir John Erichsen, Mr. Marcus Beck, Sir John Williams, and Sir Thomas Barlow would always be remembered. He also referred to the great development of medical education throughout the country which characterised recent years and to the birth of the new University of Leeds, which during the present week, at its inaugural ceremony, was about to confer honorary degrees on men distinguished by their enthusiasm for the advancement of education. The toast was responded to Dr. Martin and Dr. Foster who pointed out the new impetus given to University College Hospital by the magnificent generosity of the late Sir Blundell Maple who had not only provided funds for the rebuilding of the hospital but also for its enlargement. Sympathetic reference was made to the untiring efforts of Dr. G. V. Poore to secure adequate lighting and ventilation of the new wards, the successful achievement of which had helped to make the new hospital a model of what such institutions should be. Both speakers referred to Sir Donald Currie's timely and generous donation of £100,000 by which adequate means were found for the building of a school of advanced medical studies (pathology, medicine, surgery, and so on), for its maintenance and endowment, and for providing suitable buildings for a nurses' home; the earlier medical studies—such as biology, chemistry, physics, anatomy, and physiology—would continue to be taught in the College. Dr. Foster, in an able speech, gave a history of university education in London and showed how the University of London by its reconstitution had assumed not only examining but also teaching functions and so had realised the hopes of Lord Brougham and others; no longer was teaching to be hampered by the requirements of examination, but examination would in the future be controlled by teaching. As a first step in the reorganisation of the University of London the incorporation of University College, London, in the University would shortly take place and University College Hospital would in the future be governed independently of the College and the latter institution would be controlled by the Senate of the University through a local committee which would replace the present council of University College. The teaching of the subjects of the medical curriculum would therefore go on as hitherto, the earlier ones in the College buildings and the later ones in the school of advanced medical studies and in the hospital Dr. Foster, amid much applause, laid stress on the need for the establishment of a register and directory of the past students of the College, so that, though scattered all over the world, it would be possible to discover their whereabouts and to enlist their sympathy and coöperation. Dr. Roberts, in an appreciative and humorous speech, proposed the health of the chairman and congratulated him on his election to a second year of office as President of the Royal College of Surgeons of England. Mr. Tweedy, in his reply, referred with gratitude and pleasure to the honour which had been conferred upon him by being elected to the responsible position and recalled the names of other members of the hospital staff—Sir Richard Quain, Mr. John Marshall, Sir John Erichsen, and Mr. Christopher Heath—who had held the position before him. Dr. Roberts, Dr. Mason, Dr. Stoddart, and Mr. George Pernet contributed largely to the pleasure of the dinner by their musical performances and the proceedings terminated by a vote of thanks to the honorary secretaries, Mr. Raymond Johnson and Dr. H. Batty Shaw.

Westminster Hospital.—The annual dinner of the Medical School was held on Oct. 3rd at the Trocadéro Restaurant, Piccadilly-circus. The chair was taken by Dr. W. Rivers Pollock, senior obstetric physician to the hospital. After the loyal toasts had been duly honoured the chairman proposed the toast "The Westminster Hospital Students, Past and Present," which was responded to by Major Arthur de Courcy Scanlan, R.A.M.C., and Mr. C. G. Browne. Major Scanlan spoke of the unfailing kindness and welcome extended by members of the hospital staff to men such as himself when they revisited the hospital wards and thought that the ideal way of spending leave of absence from active service was to employ it in regular attendance in the various hospital departments. The toast of the "Westminster Hospital and Medical School" was proposed by Mr. J. Hautenville Cope, one of the governors of the hospital and an active member of the house committee; this was responded to by the senior surgeon, Mr. Charles Stonham, C.M.G., and, in the unavoidable absence of Mr. E. Percy Paton (the Dean of the Medical School), by Dr. Bertram L. Abrahams, the Vice-Dean. The toast of "The Chairman" was proposed by Dr. T. Colcott Fox. The toast of "The Secretary," Mr. Arthur Evans, was then proposed by Dr. Wills, who in the name of the hospital staff thanked him for the way in which all the arrangements of the dinner had been carried out. Mr. Evans replied. During the dinner an excellent programme of music was rendered by Pitman's Viennese orchestra and afterwards songs were sung by Mr. W. C. Nimmo, Dr. Nimmo-Watson, and Mr. Evans.

ASYLUM REPORTS.

Roxburgh, Berwick, and Selkirk District Asylum (Report for the year ending May 15th, 1904).—The average number of patients resident during the year was 327, comprising 141 males and 186 females. The admissions during the year amounted to 58—viz., 30 males and 28 females. Of these 44 were first admissions. Dr. J. Carlyle Johnstone, the medical superintendent, states in his report that among the admissions a hereditary predisposition to mental disorder existed in 33 per cent. and a suicidal tendency was observed in 48 per cent. Some of the latter class of patients had made determined suicidal attempts before admission, five of them suffered from wounds in the throat, and one from the effects of poison. In over 60 per cent. of the cases more or less serious physical disease was present. The number of patients discharged as recovered during the year amounted to 20—viz., eight males and 12 females, or 6·1 per cent. of the average number resident. The deaths during the year amounted to 26, or 7·9 per cent. as calculated on the same basis. Of the deaths three were due to cardiac disease, five to general paralysis of the insane, six to pulmonary and other forms of tuberculosis, and the rest to other causes. "There has been more than the usual amount of sickness among the patients during the year and the general health of the community has not been satisfactory." Many cases of influenza and of erysipelas occurred, attacking both patients and staff. The assistant medical officer, Dr. T. B. Mitchell, had an attack of scarlet fever. Fortunately there was no spread of the infection. "One of the most unsatisfactory features in the bill of health," says Dr. Johnstone, "is the excessive proportion of cases of pulmonary consumption, in many of which

the disease has been acquired after the patient's admission to the asylum. Consumption, unhappily, prevails in our public asylums to a lamentable extent and as compared with other institutions the Roxburgh District Asylum occupies an unenviable position. There can be no doubt that one of the most potent factors conducing to the spread of this disease in asylums is overcrowding, with consequent inefficient cubic space per patient, the insufficiency of the space in the sleeping-rooms being the most serious part of the evil." The overcrowded state of the asylum, which must be held as being the chief cause in the production of this preventable disease, makes it quite impossible to carry out any efficient system of isolation. The Commissioners in Lunacy state in their report that the asylum is much overcrowded. "In a comparatively small asylum this is undoubtedly a serious matter and there is further reason for concern in the fact that there appears to be no immediate prospect of relief, especially as regards the female division." Despite the overcrowding the amiable and generally contented condition of the majority of the patients was a testimony to the efficiency of the management. The arrangements for coping with an outbreak of fire have been carefully planned, "they appear to be capable of providing effectively against any ordinary occurrence of fire and nothing that could be foreseen has been left to chance." The medical registers and case-books were found to be kept correctly and well.

Glasgow District Asylum, Gartloch (Report for the year ending May 15th, 1904).—The average number of patients resident during the year was 636, comprising 331 males and 305 females. The admissions during the year amounted to 251—viz., 109 males and 142 females. Of these 156 were first admissions. Dr. W. A. Parker, the medical superintendent, states in his report that the character of the admissions continues to be very bad from the point of view of discharge and recovery. "No less than 162, or 64·5 per cent., of the admissions were ill over a year before or had been ill previously, and the other 35·5 per cent. included a proportion of hopeless senile cases, general paralytics, and other incurables. The bodily condition of the admissions as a whole was very poor." This year again, adds Dr. Parker, "alcohol stands, as usual, at the head of the list of causes of insanity. In not less than 60 cases it was apparently the prime factor in the causation of insanity, while it was the cause in combination with some other cause in 28 cases. Alcohol, then, was a main factor in no less than 88 of the admissions, or 35 per cent." When the question of hereditary predisposition is considered this is a serious state of matters. "A large number of these who do not become insane through drink are preparing a legacy for the future in the form of insane offspring to be cared for. During the last two years 96 cases [of insanity] have been admitted under 26 years of age. ..... In 54 of these cases there was a history of alcoholic excess in the direct line of descent, and in 51 of the 54 there was a record of parental excess in alcohol. ..... Parental alcoholic excess was present in 74 per cent. of cases under the age of 26 years. ..... It is difficult to say how this large proportion of alcohol-caused insanity can be lessened, but there is no doubt that the first step must be the awakening of the public generally to a realisation of the evil." The number of patients discharged as recovered during the year amounted to 84—viz., 29 males and 55 females, or 12·7 per cent. of the average number resident. The deaths during the year amounted to 66, or 10·3 per cent. as calculated on the same basis. Of the deaths three each were due to cardiac disease and epilepsy, four to senile decay, five to acute bronchitis, nine to pulmonary and other forms of tuberculosis, 17 to general paralysis of the insane, and the rest to other causes. "The percentage of recoverable mental cases in the sanatorium is very small and the lives of these helpless, hopeless, and useless folk will be indefinitely prolonged, thereby adding to the insane population and introducing a new fallacy in the estimation of the apparent growth of lunacy." The Commissioners in Lunacy state in their report that the asylum was throughout in good order and clean, that the patients were on the whole quiet and well-behaved, that the bedding and dormitories were in excellent condition, that the fire brigade was efficient in its work, and that the medical case-books were well and correctly kept. The committee of management states in its report that all the wards and dormitories of the asylum have been repainted, that a newly purchased farm is now under cultivation, and that the laying-out of the grounds immediately around the sanatorium for tuberculous patients has now been completed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8528 births and 4421 deaths were registered during the week ending Oct. 8th. The annual rate of mortality in these towns, which had been 17·0, 16·0, and 15·6 per 1000 in the three preceding weeks, further declined last week to 15·1 per 1000. In London the death-rate was 13·9 per 1000, while it averaged 15·6 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 2·6 in Hornsey, 5·2 in Handsworth (Staffs.), 8·4 in Aston Manor, 8·7 in Barrow-in-Furness, 9·0 in Devonport, 9·6 in Reading, 9·7 in Bournemouth, and 9·8 in East Ham and in Walthamstow; while the highest rates were 20·0 in Great Yarmouth, 20·2 in West Bromwich, 20·5 in Walsall, 20·7 in Liverpool, 21·0 in Middlesbrough, 21·3 in Burnley and in Preston, 21·5 in Stockport, and 24·4 in Salford. The 4421 deaths in these towns last week included 615 which were referred to the principal infectious diseases, against 1190, 972, and 836 in the three preceding weeks; of these 615 deaths, 359 resulted from diarrhœa, 66 from diphtheria, 62 from measles, 53 from "fever" (principally enteric), 32 from scarlet fever, 39 from whooping-cough, and four from small-pox. No deaths from any of these diseases were registered last week in Brighton, Bournemouth, Burton-on-Trent, or Smethwick; among the other towns they caused the lowest death-rates in Willesden, Hornsey, Northampton, and Aston Manor; and the highest rates in Walsall, Grimsby, Liverpool, Warrington, Salford, Oldham, Burnley, Blackburn, Hull, and Middlesbrough. The greatest proportional mortality from measles occurred in Birkenhead, Liverpool, Salford, and Huddersfield; from scarlet fever in Hanley and Halifax; from diphtheria in East Ham and Huddersfield; and from diarrhœa in Walsall, West Bromwich, Grimsby, Warrington, Bolton, Burnley, Blackburn, Preston, and Middlesbrough. The mortality from whooping-cough and from "fever" showed no marked excess in any of the large towns. Of the four fatal cases of small-pox registered in these towns last week, two belonged to Oldham, one to Bury, and one to Gateshead. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been five, five, and three at the end of the three preceding weeks, had further fallen to two at the end of last week; one new case was admitted last week, against none in either of the two preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital on Saturday last, Oct. 8th, was 2341, against 1929, 1969, and 2158 on the three preceding Saturdays; 409 new cases were admitted during the week, against 340, 284, and 406 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 141, 169, and 171 in the three preceding weeks, declined again last week to 166, but were 19 above the number in the corresponding period of the preceding year. The causes of 37, or 0·8 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Salford, Bradford, Leeds, Sheffield, Hull, Newcastle-on-Tyne, and in 47 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Manchester, Preston, Sunderland, and Tynemouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·5, 16·0, and 16·6 per 1000 in the three preceding weeks, declined again to 15·1 per 1000 during the week ending Oct. 8th and was equal to the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·4 in Aberdeen and 12·7 in Edinburgh to 20·2 in Greenock and 20·4 in Dundee. The 501 deaths in these towns included 36 which were referred to diarrhœa, 20 to whooping-cough, six to "fever," five to diphtheria, three to measles, and one to scarlet fever, but not any to small-pox. In all, 71 deaths resulted from these principal infectious diseases last week, against 103, 87, and 101 in the three preceding weeks. These 71 deaths were equal to an annual rate of 2·1 per 1000, which was also the mean rate last week from the same diseases in the 76 large

English towns. The fatal cases of diarrhœa, which had been 69, 60, and 58 in the three preceding weeks, further declined last week to 36, of which 18 were registered in Glasgow, eight in Edinburgh, eight in Dundee, and two in Paisley. The deaths from whooping-cough, which had been 13, 17, and 23 in the three preceding weeks, declined again to 20 last week and included ten in Glasgow, four in Paisley, two in Edinburgh, two in Dundee, and two in Aberdeen. The fatal cases of "fever," which had been eight, three, and 11 in the three preceding weeks, decreased last week to six, of which four occurred in Greenock. The deaths from diphtheria, which had been seven, one, and four in the three preceding weeks, rose again to five last week, and included three in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 55, 66, and 75 in the three preceding weeks, declined again last week to 73, but were 11 in excess of the number in the corresponding period of the preceding year. The causes of 13, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 16·8, 25·9, and 19·0 per 1000 in the three preceding weeks, further declined to 17·5 per 1000 during the week ending Oct. 8th. During the past four weeks the death-rate has averaged 19·8 per 1000, the rates during the same period being 14·3 in London and 14·9 in Edinburgh. The 127 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 11 from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against 17, 34, and 19 in the three preceding weeks; of these, 10 resulted from diarrhœa, three from whooping-cough, one from scarlet fever, and one from "fever," but not any from small-pox, measles, or diphtheria. These 15 deaths were equal to an annual rate of 2·1 per 1000, the death-rates last week from the principal infectious diseases being 1·2 in London and 1·7 in Edinburgh. The fatal cases of diarrhœa, which had been 14, 28, and 16 in the three preceding weeks, further declined last week to ten. The deaths from whooping-cough, which had been four and one in the two preceding weeks, increased again to three last week. The fatal cases of "fever," which had been two, one, and two in the three preceding weeks, declined last week to one. The 127 deaths in Dublin last week included 29 among children under one year of age and 30 among persons aged 60 years and upwards; the deaths of infants showed a considerable decline, while those of elderly persons were slightly in excess of the number in the preceding week. Six inquest cases and three deaths from violence were registered, and 49, or more than a third, of the deaths occurred in public institutions. The cause of one, or 0·8 per cent., of the deaths was not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon Chaworth Louis Nolan has been placed on the Retired List, at his own request (dated Oct. 6th, 1904).

The following appointments are notified:—Fleet Surgeons: G. A. Smith to the *Pembroke* for Chatham Dockyard; A. L. Christie to the *Pembroke;* and H. R. Osborne to the *Mars*. Staff Surgeons: A. S. G. Bell to the *Spartan*, temporary; L. Bidwell to the *Hogue;* and H. W. G. Green to the *Medea*. Surgeons: H. E. Fryer to the *Shearwater*, additional and on recommissioning; E. R. Townsend to the *Hogue*; G. Moir, N. B. V. Jacob, H. Stone, J. D. Keir, A. B. Marsh, J. M. Gordon, T. E. Blunt, and F. E. McCune to the *Fire Queen;* H. B. German, G. Nunn, G. E. Hamilton, J. McCutcheon, and W. H. Horsfall to the *Vivid;* W. L. Hawkins, G. O. M. Dickenson, and W. T. Haydon to the *Wildfire;* D. D. Turner, A. B. Cox, B. S. Robson, A. A. Chancellor, and F. R. Featherstone to the *Pembroke*, all for disposal; and W. P. Hingston to the *Vivid*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel G. J. Coates is placed on temporary half-pay on account of ill-health (dated Sept. 26th, 1904).

Lieutenant-Colonel R. L. Love and Lieutenant-Colonel J. Gibson, on their return from South Africa are ordered to Ireland for duty. Major C. A. Lane assumes charge of the Station Hospital, Colchester. Major A. O. C. Watson takes over charge of the Station Hospital, Aberdeen. Lieutenant L. Bousfield, now at Aldershot, is ordered to London for duty at the Royal Army Medical College.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant J. N. Macmullan, 1st Herefordshire Rifle Volunteer Corps, to be Surgeon-Lieutenant (dated Oct. 8th, 1904).

THE WAR IN THE FAR EAST AND INSANITY.

A telegram from Chifu, announcing the arrival there of two fugitives from Port Arthur recognised as insane, prompts a writer in the *Novosti* to say that these are the first cases in the present war of such a nature reported from the besieged city. Hitherto cases of the kind had only been observed with the field army or in the fleet. Dr. O. A. Tchtchott, who for many years has been the director of one of the largest asylums for the insane in the capital of Russia, he being a well-known alienist, has, in conversation with the writer of the article, stated, after dwelling on the savage nature of the struggle at Port Arthur as being well calculated to induce insanity, "we all knew war was horrible but no one anticipated the horrors of this latest struggle. ..... A medical certificate from a private specialist is not valid to excuse a conscript from service. An epileptic is only let go on the evidence of two witnesses of his having had epileptic fits, besides the medical man's certificate. Is it wonderful, then," he asks, "that in war such men fail to support the horrors of the fight? We should rather marvel, on the other hand, at the great strength of the Russian and his psychic vitality. In previous sieges madness was more prevalent than in this one and the instruments of destruction were much less powerful. There were many cases of insanity during the siege of Paris." He concludes his observations by explaining that insanity brought about by war conditions, such as privation, fear, and the like, is fairly easily curable compared with insanity resulting from wounds in the head.

THE ARMY REORGANISATION SCHEME.

Mr. Arnold-Forster, Secretary of State for War, recently addressed a large audience at Sheffield. With a great deal of what he said on that occasion most people will agree, just as they will freely admit that his scheme of army reform has many excellent points, but what they want is far more information about it than they happen to possess at the present time. Mr. Arnold-Forster speaks with much apparent confidence regarding the new scheme of army administration but from all we can hear and learn it does not grow in public favour the more it is examined and considered. We can only hope that eventually some reasonably complete and comprehensive scheme which shall commend itself to the nation and the services may be forthcoming and that medical science and army hygiene will have a fit and proper place in it when it does.

DEATHS IN THE SERVICES.

Lieutenant-Colonel George Ryan, R.A.M.C. (retired), recently, at the age of 59 years. He entered the service in 1868, became surgeon in 1873, surgeon-major in 1881, and retired in 1889 with the rank of surgeon-lieutenant-colonel. He served in the Zulu war of 1879 (medal).

THE WAR IN THE FAR EAST.

Events have been progressing in the Far East with dramatic rapidity since we last wrote and at the present moment one of the greatest battles on record is being fought and possibly may even have been decided. The opposing forces are on the largest scale and outnumber those that fought at Leipsic or Koeniggratz. From a military as well as a political point of view the situation is one of extraordinary interest and we shall soon know whether the enthusiasm which is said to have been kindled in Russia by General Kuropatkin's proclamation to his troops is to grow into a big flame of rejoicing or is only to be succeeded by a deepening of the gloom which, if report speaks truly, has been the more or less prevalent spirit in Russia during the present war. The brief rescript of the Mikado to his people urges on them the maintenance of a patient and steadfast frame of mind. It does not apparently hold out any hope of an immediate end to the war. According to official reports the health of the Russian army in Manchuria has always been good, but from other sources of information it is alleged that much sickness,

more especially from typhus and typhoid fever, is prevalent among the Russian troops; if so this would probably supply, apart even from the operation of any political causes, a strong reason for General Kuropatkin's taking immediate action.

Correspondence.

"Audi alteram partem."

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

To the Editors of THE LANCET.

SIRS,—I am afraid that "Coroner" has made a mistake. Unless I am in error in the case in question the man was pronounced to be dead on arrival at the hospital. That being so the house surgeon would have received the same fees as the "pathologist" did and so no additional expense was incurred. In the majority of cases where death occurs in the institution the ratepayers are, of course, put to extra expense by calling in Dr. Freyberger. There is a further point to which I should like to draw attention, and that is that apparently in every case of accidental death, even when it is perfectly obvious what the cause of death was, although perhaps the exact nature of the injuries is not apparent externally, Mr. Troutbeck orders Dr. Freyberger to make a necropsy, thus increasing the expenses by one guinea at least. In the North-west district of London it is, I believe, a rule with the coroner not to order a post-mortem examination when it is quite obvious that the deceased met his death as a result of the accident. This is a point that I hope some juryman will ask a question upon at some future date. For myself, I cannot be too thankful that I was house surgeon at St. Thomas's Hospital in the days of the late Mr. Braxton Hicks. Although "only just qualified" our evidence was accepted on all occasions.

I am, Sirs, yours faithfully,

F. HARCOURT GERVIS.

West Hampstead, N.W., Oct. 8th, 1904.

To the Editors of THE LANCET.

SIRS,—Probably the annotation referred to in the letter of "Coroner" in THE LANCET of Oct. 8th, p. 1046, quoted the observation of Mr. Troutbeck to the effect that no extra expense was caused to the rates by the employment of Dr. Freyberger but did not make upon it the comment suggested by "Coroner" for this reason. The staff of a hospital receive no fee for post-mortem examinations and for attendance at inquests when the deceased *has died in the hospital*, but in the particular case in question the body of the deceased, according to the report before me, had been brought to the hospital after death. This deprivation of fees has always seemed to me to be an unjust one, for the staff of a hospital perform voluntarily or are paid to perform duties in which giving evidence as to their patients' bodies after death is not included, and if they are taken away from their duties in order to give such evidence have to perform them at some other time just as other medical men have to do. Whatever principle, however, may underlie the provision of the Coroners Act which thus penalises the medical officers of hospitals the legislature can hardly have intended that they should gratuitously perform post-mortem examinations upon any dead body brought to the hospital by the police or other persons. At all events, it has not said that they must do so and there seems to be no reason why the literal interpretation of the section should be enlarged.

I am, Sirs, yours faithfully,

Oct. 10th, 1904. INNER TEMPLE.

RADIO-ACTIVE BODIES AND INSANITY.

To the Editors of THE LANCET.

SIRS,—Absence from town has prevented my seeing THE LANCET of Sept. 17th with your annotation dealing with the action of radium upon some of the lower animals and quoting the experiments of Dr. E. C. London of St. Petersburg upon frogs and mice, in which it is seen how fatal the effects of radio-active bodies may be upon animal life, for mice died in three days and frogs in from 13 to 14 days from such exposure. The effects of the x rays and the ultra-violet (Finsen's light) upon cell life and the control exercised by light over the nutrition of the cell are so peculiar that, for certain conditions under proper directions, the use of radiant light is recognised as among the most valuable of therapeutic remedies. Some time ago Sir James Crichton-Browne—whose interest in sanity in its widest sense is a matter of notoriety and whose brilliant gifts have ever been at the disposal of the most afflicted of humanity—wrote to me suggesting that some effort might be made to apply the less powerful radio-active bodies for the cure of general paralysis of the insane, a disease which has hitherto baffled all attempts at relief and which, in spite of the application of all present known remedies, has remained incurable. It was hoped either that the toxæmia or the plasmocytes or the general inflammatory condition causing or accompanying this disease might in some way be modified or arrested, but as radium might involve some risk Sir James Crichton-Browne suggested the use of thorium hydroxide With the deference due to his suggestion I consulted the high authority of Dr. J. Mackenzie Davidson, medical officer in charge of the Roentgen-ray department of the Royal London Ophthalmic Hospital and the Charing Cross Hospital, whose paper[1] upon the treatment of cases by radium bromide hinted that thorium hydroxide should be used for controlling microbic and cellular life in septic ulcers, and which greatly interested me. Dr. Davidson suggested that as thorium was a million times less active than radium, so a cap filled with the less active body and worn on the head for long periods might exercise some ameliorating or, at any rate, an alterative effect upon the conditions within the skull, and as thorium had none of the burning and destructive effects of the *beta* rays of radium it might possibly act upon the cerebral system through its penetrating powers which the *gamma* rays of radium were known to exercise. The experience of Dr. J. Gordon Sharp of Leeds,[2] acting upon a recommendation of Mr. Frederick Soddy, M.A.,[3] with a solution of thorium nitrate as an inhalation for lung disease, suggested that there might be some satisfactory result from this, although Dr. J. M. H. MacLeod,[4] assistant physician to the skin department in Charing Cross Hospital, records that two cases of lupus, for which he had tried thorium, were without apparent results. Starting with what my respected teacher, Sir Dyce Duckworth,[5] might be pleased to call doubtful wisdom but the best intentions I determined to break through the "tyranny of traditions" in respect to old approved remedies and to "pursue the novelty." I therefore selected A.B., a general paralytic admitted on March 16th, 1904, aged 28 years, a policeman, with the usual previous history of such cases, and had a specially devised cap made, as suggested by Dr. Davidson, into the closely quilted seams of which about 500 cubic centimetres of thorium hydroxide were placed, and this cap was worn night and day. The patient was of the melancholy type, an unpromising enough specimen, whose pupils were inactive to light, whose knee reflexes were increased, and whose habits—as occurs with the onset of dementia—were defective. The case was looked upon as unfavourable from the outset but he was discharged "recovered" on June 23rd, 1904, and subsequent reports of him have been most favourable. He himself dates the commencement of his progress from the time, soon after admission, when he wore the thorium hydroxide cap, which he felt very disinclined to leave behind him on his departure from the asylum and to which he attributes his "recovery."

I do not quote this case as furnishing any definite evidence of the curability of general paralysis of the insane. Those of us who see many cases know that some have long remissions, irrespective of any active treatment, and during which they are able to resume their place in the family circle and in society. Although I fully agree that what is new is not always true, I venture to think that where all is blank there is some room for the "pursuit of novelties" and that a tendency to try new remedies is not always lamentable and deserving of rebuke, but that it may on the other hand be a part of that "divine discontent" which is the temper essential to progress.—I am, Sirs, yours faithfully,

ROBERT JONES, M.D. Lond., F.R.C.S. Eng.

Claybury, Oct. 10th, 1904.

[1] Brit. Med. Jour., Jan. 23rd, 1904.
[2] Ibid., March 19th, 1904.
[3] Ibid., July 25th, 1903.
[4] Ibid., June 11th, 1904.
[5] Ibid.

A FORM OF SEPTIC CONJUNCTIVITIS FOUND IN ASSAM.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 7th, 1903, p. 1299, Mr. R. W. Doyne described a variety of septic conjunctivitis which has certain peculiar features and which, as far as I know, is not mentioned in any English text-book on ophthalmology. A very similar form of conjunctivitis is to be found among the coolies on the tea-gardens of Upper Assam, and I have had three cases among Europeans during the last three months. The symptoms present were similar to those described by Mr. Doyne—namely, the preliminary palpebral conjunctivitis, which, if neglected, tends to spread to the ocular conjunctiva, the infiltration of the lids, a seropurulent discharge, enlargement of pre-auricular gland, and resemblance to trachoma. It appears to attack persons of all ages. I have seen it in quite small children and old people and it is apparently not connected with unhealthy surroundings or weakly constitutions, as it occurs in healthy, able-bodied coolies, and my three European patients were strong and well. The condition subsided in from two to six weeks, completely clearing up under nitrate of silver or sulphate of copper, an eye shade, and open air. It is invariably uniocular and I have only twice seen it in both eyes, and these were cases which came to hospital late and which assumed a chronic character, being only cured after from two to three months' treatment. As to the cause, Mr. Doyne suggests the possible infection from animals suffering from the mange and the likelihood of this source of infection in this country is very great. Quite one-third, and possibly more, of the native dogs suffer from the mange and as these animals are in close contact with the coolies in the lines, sleeping in their huts and running about among the children, the possible source of contagion is evident. Another way of infection may be from insects getting into the conjunctival sac and directly infecting the conjunctiva. This form of conjunctivitis appears to be comparatively much more frequent at the commencement of the rains than during the rest of the year, and it is just before the rains that insects are most numerous and troublesome. With regard to the European patients, one owned a cat which was suffering from mange and which he had been in the habit of stroking; a second attributed the eye trouble to an insect which had got into the eye and caused some pain; while no cause could be assigned to the third.

I am, Sirs, yours faithfully,

HOWARD M. STRATFORD.

Dibrugarh, Upper Assam, Sept. 15th, 1904.

THE CARE OF THE FEEBLE-MINDED.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 1st, p. 963, you call attention to the efforts made by the National Association for the Feeble-minded. It is possible that some who are interested in this most useful work may not know that the Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded has for several years been most active in its efforts to help the mentally defective and to minimise the evils that must of necessity arise if they are allowed to mix freely with others. The society was founded six years ago by Miss Dendy of Manchester, who first studied the question thoroughly in all its bearings and then secured the help of a strong committee to carry out her suggestions. There are at the present time two homes—one for boys (opened three years ago) and one for girls. As more accommodation is urgently needed the committee contemplate further building as soon as possible. I may add that I believe it was Miss Dendy who first in this country urged the necessity for *permanent* care of the mentally defective.

I am, Sirs, yours faithfully,

Manchester, Oct. 11th, 1904. C. CHRISTOPHER HEYWOOD.

STATIC MACHINES AND X-RAY DERMATITIS.

To the Editors of THE LANCET.

SIRS,—In a description of an improved x-ray tube for use with static machines in THE LANCET of Oct. 1st, p. 958, Dr. W. S. Sharpe says that he "understands that dermatitis from rays generated by a static machine has not yet been seen." As such a belief seems to be widespread and if acted on might lead to some deplorable results, may I point out that it has absolutely no justification in fact? I have lately treated six patients with x rays produced by a mica-plate static machine and in every case I have produced a definite reaction of the skin from an erythema accompanied by itching to a weeping dermatitis when I have intentionally pushed the treatment. The cases were all different in nature, consisting of lupus of the face, rodent ulcer of the nose, recurrent cancer of the breast, sarcoma of the skull, cancer of the uterus treated through the abdominal wall, and cancer of the sigmoid flexure becoming superficial. I rarely give more than three exposures a week, I never put the target nearer than six inches from the skin, and I very seldom exceed ten minutes for the duration of a single exposure. Dr. W. A. Pusey in his book on x rays says, "There is, in my opinion, not the slightest vestige of reason for the claim that x rays produced by a static machine are less liable to cause burns than those produced by coils." I have used both coils and static machine for exciting an x-ray tube and I am entirely of Dr. Pusey's opinion. I am, Sirs, yours faithfully,

ARTHUR J. CLEVELAND, M.D. Lond., M.R.C.P. Lond.

Norwich, Oct. 10th, 1904.

SOME POINTS IN THE PREVENTION OF EPIDEMIC DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—I will reply to Dr. J. T. C. Nash's questions in THE LANCET of Oct. 8th, p. 1043, seriatim. I meant epidemic diarrhœa in the cases to which I alluded. 1. These cases are stated by the mothers to be wholly breast-fed and this is from the nature of the case the only guarantee that they are. 2. The mother's statement is the only guarantee. 3. No. Such instructions would not, and probably could not, be carried out. 4. No. This is my fault—they ought to have been forbidden. 5. No. 6. Yes. It would from the nature of the case be impossible to enforce the *régime* mentioned in questions 5 and 6. My patients were seen at a dispensary in one of the poorest districts of Liverpool, the houses of which are insanitary, and there are numerous open brick middens in the district.

During a three years' practice in India I became convinced that the large amount of human fæces lying on the ground and the enormous number of flies at certain seasons are two potent factors in the spread of the large amount of typhoid fever, cholera, dysentery, and diarrhœa there. Some of the public latrines adjoin kitchens and I have watched flies settle on fæces and then fly through the window and settle on food. My letter in THE LANCET of Oct. 1st, p. 981, was written, not to criticise Dr. Nash's able letter, but for information which he has so kindly given and for which I thank him.

I am, Sirs, yours faithfully,

Oct. 8th, 1904. PRACTITIONER.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Water-supply.

ALTHOUGH rain has fallen and the supply of water has been cut off at night for some weeks, the quantity in the Longdendale reservoirs is sinking lower day by day and it is said that there is now only enough to last for 25 days. The rainfall at Longdendale during the last week-end was 0·75 of an inch but there was a greater consumption, as it was turned off at 8 P.M. instead of 7 P.M. This extra hour meant an increase in consumption of more than 2,000,000 gallons on Sunday night last, as compared with that of the previous Sunday. Now that the drought has once broken the probability is that we shall once more tide over this difficulty without increased restrictions.

Presentation of Whitworth Park to the City.

On Oct. 5th the Whitworth trustees made a formal transfer of Whitworth Park to the Manchester corporation. The buildings appropriated to the art gallery and about five acres of land will remain the property of the Institute Galleries and the remainder of the park is transferred to the corporation in the form, for technical reasons, of a lease for 1000 years, subject to the annual rent of £10. The

purchase of the park cost originally £45,000 and up to the present, exclusive of the Institute Galleries and their immediate grounds, it has cost about £70,000. The chairman of the parks committee said that in 1887 the corporation had five parks and four playgrounds; now it has 13 parks and 33 recreation grounds with two nurseries for plants, the total area being 1277 acres. Before the end of the year the inclusion of Withington and Moss Side within the boundary of the city will add several more open spaces. The total number of parks and open spaces will then be about 60. Whitworth Park is opposite the new sites for the infirmary, the Southern Hospital, and the Eye Hospital, and this large open space, only divided from them by the width of Oxford-road, will be to them an inestimable advantage.

Preston Infirmary.

The solicitors of the late Mr. R. Calvert have informed the board of management of the Preston Royal Infirmary that he has bequeathed a sum of £5000 to the infirmary building committee. A few years ago he gave a similar sum towards the extension of the infirmary. It is stated also that he has left £2000 for the Home of the Blind at Fulwood and the same amount to the Walton-le-Dale Working Men's Institute.

A Plague of Gnats.

The Cheetham-hill and Higher Broughton districts have been visited by a plague of gnats and so dense was the cloud produced by them that the sky was darkened. Two or three Sundays ago they were a great annoyance to the people in the streets who were trying to beat them off with handkerchiefs or prayer-books. The districts named afford many facilities for the successful breeding of gnats in the numerous patches of stagnant water on the bits of waste ground and in the damp ashpits which are more or less abundant. Above the latter clouds of gnats may often be seen in sportive flight, each apparently keeping pretty much to itself and not mingling with that from the neighbouring ashpit. If the people object to the gnats they should take a lesson from the work done on the West Coast of Africa and look after the breeding places.

Home for Crippled Children.

On Oct. 1st the Lady Mayoress of Manchester opened a "country nursing home" which has been established by the Crippled Children's Help Society (Manchester and Salford) in Cross-lane, Rose-hill, Marple. It is a fairly large seven-roomed cottage which has been neatly furnished, chiefly by gifts from benevolent friends. It will accommodate nine children who during their stay of a fortnight will be under the charge of a trained nurse. About £200 a year will be required for its support. For some time past the society has sent crippled and invalid children to the country and the seaside where they were boarded-out at farms or cottages. There were disadvantages about this plan which will not exist in the house at Marple. Dr. H. Burton, medical officer of health of the Marple urban district, has kindly offered his medical assistance if it should be required.

A "Curious" Practice at St. Helens.

What is called in the report a curious, but what most people would call a dangerous, practice is said to be in vogue at St. Helens. The people are stated to put arsenic in the whitewash used in their houses to keep down vermin. One would like to know if the custom prevails extensiveiy and what the result is on the health of the people, for it is pretty certain that minute particles of the limewash must become detached.

Need for the Teaching of Cleanliness.

The medical officer to the Clitheroe education committee reports that while most of the children are healthy and cleanly many are suffering, both bodily and mentally, from the ignorance of, or neglect by, parents of the most elementary laws of hygiene and unless the present generation of children receives instruction in these matters he sees no reason to think that the next generation of school children will be more fortunate than the present one. No doubt the same remark is applicable not only to Clitheroe but to a large proportion of the elementary schools throughout the country. It is a pity that together with the various "ologies," more or less useful or useless, now taught more stress is not laid on the benefits which follow the practice of the injunction—wash and be clean.

Oct. 11th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

University College, Cardiff.

THE session of the Faculty of Medicine of University College, Cardiff, was opened on Oct. 7th by an address from Dr. A. F. Dixon of Trinity College, Dublin, and formerly professor of anatomy at Cardiff. A course of lectures will begin in November upon school hygiene and will be addressed specially to school teachers, who will be granted certificates after sufficient examination in the subject. The lectures will be delivered by Dr. D. Hepburn, Dr. Edward Walford, Dr. William Williams, and Dr. H. A. Schölberg. A series of lectures to sanitary inspectors has been given by Dr. Walford and Dr. Williams for several years past. The lectures for this session commenced on Oct. 10th and will be continued twice weekly for four months. A course of theoretical instruction to midwives has been established in connexion with the College and the first lecture was delivered on Oct 4th by Dr. Ewen J. Maclean. It is expected that this course will be available for women residing not only in Glamorganshire but in the neighbouring counties.

Worcestershire Isolation Hospitals.

A recent report of Mr. G. H. Fosbroke, the medical officer of health to the Worcestershire county council, is of more than local interest and should be of service to the public health officers of those districts in which the erection of isolation hospitals is in contemplation. The cost per bed is given of three hospitals which have lately been erected in the county. In the hospital at Malvern with 22 beds this cost was £478, in that at Stourbridge with 30 beds it was £391, and in that at Bromsgrove with 40 beds it was £300. It appears that the Worcestershire and Staffordshire county councils have endeavoured to reduce the expenditure on such hospitals by obtaining from the Local Government Board sanction to substitute unclimbable fences for the continuous walling which the Board required to be placed around the grounds of isolation hospitals. The Board would not give way to these county councils but Mr. Fosbroke now quotes from a report of the West Riding sanitary committee in which it is stated that the Board has approved a proposal to surround the site of the Harrogate and Knaresborough joint hospital with a belt of trees and shrubbery with short lengths of walls. This concession of the Local Government Board will in some instances very considerably reduce the cost of isolation hospitals.

Tuberculosis in Cattle.

About a year ago a scheme of compensation for tuberculous cattle destroyed by sanitary authorities was arranged between a large number of butchers, cattle dealers, and farmers in South Wales and Monmouthshire. With respect to cattle sold at certain auctions the farmers agreed to pay into a compensation fund 1*s.* per head for cows and bullocks, 6*d.* for calves, and 2*d.* for pigs. The butchers were to receive three-fourths of the value where a whole carcass was condemned on account of tuberculosis and full value where only parts were condemned provided the animal was slaughtered within 14 days of purchase. Since the establishment of this scheme it has only been necessary to pay compensation in one instance and the fund has accumulated over £40. It has therefore been decided to discontinue the contributions and to renew them only if necessity should arise.

Employment of Children.

The Rhondda urban district council has for many months had under consideration by-laws for regulating the employment of children and has now submitted draft proposals to the Home Secretary. The first by-law as finally decided upon provides that no child under 11 years of age shall be employed by barbers, grocers, butchers, newsvendors, printers, drapers, or in any occupation involving the lifting, carrying, or removing anything so heavy as to be likely to cause injury to the child. An effort was unsuccessfully made by some members of the council to raise this age-limit to 13 years. Other by-laws limit the employment of children to 30 hours in each week and to seven hours daily. No child is to be employed on Sunday or later than 10 P.M. on week days. In barbers' shops or fried-fish shops the limit of time for

employment proposed is 20 hours in each week, of which seven hours may be on Saturday up to 9 o'clock at night. It has not yet been decided whether these by-laws when in force shall be administered by the health department, or by the police, or by the education committee.

Lunatic Asylum for Newport.

The asylum which is being erected by the Newport (Mon.) corporation at Caerleon is approaching completion. The Newport patients are at present treated in the county asylum at Abergavenny and Dr. W. F. Nelis, who has been assistant medical officer at this asylum for 24 years, has been appointed medical superintendent at Caerleon.

The Recent Accident on the Great Western Railway.

Among the passengers in the terrible railway accident which occurred on Oct. 1st near Llanelly were Dr. Douglas A. Reid, medical officer of health of Tenby, and Dr. Hepburn, dean of the medical faculty of University College, Cardiff. Dr. Reid was rather seriously injured and remained at Llanelly. Dr. Hepburn, who was travelling in the rear of the train, happily received no injury and was able to render assistance to other less fortunate passengers.

Small-pox in Shropshire.

Two cases of small-pox have occurred in the Salop and Montgomery county asylum at Bicton Heath, Shrewsbury.

Appointment of a Colliery Surgeon.

Dr. Evan C. Thomas of Llanybyther has been elected by the workmen of the Powell Dyffryn collieries at Aberaman as their surgeon.

A "Home of Peace for the Dying."

The Bishop of Exeter on Oct. 10th dedicated the "Home of Peace for the Dying" at Exeter. Through a munificent donation, Emsborough House, at Exeter, has been purchased and furnished for the purposes of the home, and a suitable mortuary has been added. Funds are needed for the annual support of the institution, and it is hoped that liberal subscriptions will be forthcoming so that the payments required from the patients shall be as small as possible.

Oct. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Veterinary College of Ireland.

THE opening meeting of the fifth session of the above college was held on Oct. 5th in the theatre of the college. Sir Christopher Nixon, President of the Board of Governors, who occupied the chair, distributed the prizes awarded at the recent examinations to the successful students.

The Meath Hospital and County Dublin Infirmary.

The inaugural address preparatory to the opening of the medical session was delivered by Professor F. Conway Dwyer at the Meath Hospital on Oct. 11th. It was entitled the Evolution of Modern Surgery and was listened to by a large audience, Sir Francis R. Cruise occupying the chair.

Infantile Mortality in the North Dublin Workhouse.

At a meeting of the board of guardians of the North Dublin union held on Oct. 5th Dr. E. C. Bigger, medical inspector of the Local Government Board, furnished a report in reference to the nursery of the workhouse from which it appears that out of a total of about 1000 infants received during the three years ending June 30th, 1904, there were no less than 396 deaths. Dr. Bigger declares this mortality to be entirely excessive even when allowance is made for the class of children received. The report goes on to say that the place in which those infants are housed is insufficient to accommodate their number, is insufficiently ventilated, and built on the site of an old graveyard which was infested with rats. There are generally between 60 and 70 inmates of this curious nursery, the nursing staff of which consists of one sister, two paid attendants, and about eight inmates during the day, while the night staff is limited to one trained nurse and two inmates. It does not seem surprising that under the above conditions at least every third child who enters the nursery dies.

Health of Belfast.

At the meeting of the city corporation of Belfast held on Oct. 4th it was reported that after a conference between the representatives of the Forster Green Hospital and the Lord Mayor it was decided before going further to have an interview with the Local Government Board. This took place on Sept. 23rd, when questions as to the cost of maintenance of patients and their admission and discharge were discussed. Ultimately Mr. T. J. Stafford, medical commissioner of the Local Government Board, advised that opinion of counsel should be taken on these matters. In the meantime the Local Government Board has sanctioned a loan of £5000 for the purpose of purchasing the grounds and lands known as the Abbey to be used as an auxiliary workhouse for consumptives. During the past four weeks the number of cases of infectious diseases notified have increased, being 275 (92 cases of typhoid fever, 81 of simple continued fever, 55 of scarlet fever, 28 of erysipelas, 13 of diphtheria, three of membranous croup, two of small-pox, and one of puerperal fever). There were 92 deaths from zymotic disease, 75 from phthisis, and 50 from disease of the respiratory organs (making a total of 125 from the latter two causes).

The Belfast Maternity Hospital.

The work in connexion with the new Maternity Hospital is so far advanced that it has been possible to arrange to open it on Nov. 7th, when the wife of the Irish Chief Secretary, Countess Grosvenor, is to take the principal part in the proceedings. The committee is anxious that a small debt of £500 shall be wiped out before that interesting occasion in order that the charity may start free from debt. Of the £9000 required for building the new hospital £8500 have already been contributed. This hospital—established 108 years ago—in its enlarged and thoroughly modernised buildings will be of enormous advantage to the Belfast Medical School in the training in midwifery of students and nurses.

The Belfast District Asylum.

In reference to the difference of opinion between Mr. W. E. Ellis (Local Government Board auditor) and the Belfast Asylum the following motion was unanimously passed at a meeting of the Asylum Board on Oct. 10th:—

That the committee of management of the Belfast District Lunatic Asylum, having before them letters from the Local Government Board, dated 21st and 28th ult., relative to the non-publication of Dr. Ellis's report on the audit of the asylum accounts, beg to inform the Local Government Board that the certified abstract of same was duly published on the 20th July last. This committee, after careful consideration of Dr. Ellis's report, feel that they would not be justified in publishing a document containing inaccurate and misleading statements respecting the administration of the asylum, and unanimously resolved that same be not published. The committee are aware of the provision directing publication of auditors' reports, but would respectfully remind the Local Government Board that the publication of such reports has not always been insisted on by them even within a recent date. The committee are, however, anxious to assist the Local Government Board in the carrying out of its enactments, and with a view to prevent undue interference with the administration would recommend that the accounts of the Belfast Asylum in future be audited not by Dr. Ellis but by any other auditor appointed by the Local Government Board. Having regard to the fact that the Local Government Board is still in correspondence with this committee on the subject of its non-publication, they would be glad to know by whose authority the report of Dr. Ellis referred to was published in the Belfast *Northern Whig* of the 29th ult.

Oct. 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Phlebitis.

As already mentioned in THE LANCET of August 13th, p. 499, M. Lucas-Championnière at the last meeting of the Academy of Medicine before the recess gave an account of a new method of treating phlebitis. This procedure, which he highly recommended, consisted in the employment of a form of gentle massage, quite different from muscular movement but sufficient to restore the circulation locally interrupted by the formation of blood-clots which had created a permanent obstruction in the inflamed veins. M. Reynier did not agree with M. Lucas-Championnière on this subject and on Oct. 4th, when the meetings were resumed, he drew attention to the danger of embolism that existed whenever a vein contained a clot which was liable to be displaced when muscular contraction coöperated with the vascular *vis a tergo*. He then described a case of the kind in which he himself was the patient. Being confined to bed with pneumonia and on the fifteenth day of the

disease, but not suspecting that he suffered from phlebitis, he had occasion to rise. Immediately on returning to bed he had symptoms of embolism from which he fortunately recovered. One of his friends, after having for 30 days suffered from phlebitis of the saphena vein, was similarly affected. He had been told that he might get up but he had scarcely left his bed when he fell quite helpless. M. Reynier considered that in all cases of phlebitis the patient ought to be forbidden to make the least movement as long as the veins were painful and the clot was not organised. A distinction must be made between varicose veins otherwise normal and thrombosed veins. In a patient suffering from varix and old phlebitis massage might excite latent microbism. Massage often did more harm than good and medical observation has shown that it might cause further phlebitis which might kill the patient. In cases of phlebitis walking ought not to be permitted beyond a very limited extent; much walking produced tension of the nervous system and very painful cramps. Massage ought not to be permitted until after complete recovery from phlebitis.

Mosquitoes and Malaria in Madagascar.

At the same meeting of the Academy of Medicine M. Laveran presented a very important communication on this subject, with special reference to various particulars. He has observed among the natives the frequency of malaria in very young children, whose blood very often contained malaria parasites and who were therefore a frequent source of the disease. This prevalence of malaria in children was due partly to the circumstance that the symptoms of malaria were usually not well marked in them and partly to the difficulty of giving them quinine. A variety of causes favoured the dissemination of malaria. In the cultivation of rice, when the harvest was over the stalks were allowed to decay in stagnant water which thereby became a fertiliser for the next crop, but in the meantime acted as a focus of malaria by providing a breeding place for the anopheles. This system has been adopted by the Betsileo since the conquest, as it was more economical than the old method by which rice was grown in running water. The consequence was that malaria now made great havoc among the natives, although it used to be rare. Formerly also the people inhabited the high tablelands, but on account of the general security established since the conquest they have now come to live in the plains near their rice fields. There was therefore obviously an urgent necessity for enforcing in Madagascar special by-laws relative to rice cultivation, these by-laws being superadded to the general regulations for the prophylaxis of malaria. For instance, the rice fields ought to be allowed to become dry immediately after the harvest. All rice ought to be grown in running water and not in stagnant water. Dwelling houses ought to be at least two kilometres (a mile and a quarter) from the rice fields. The ordinary means of protection against anopheles bites, such as wire gauze, veils, and gloves, ought to be used at night by the work-people who ought also to take quinine as a preventive. General Gallieni has done a great deal in this respect. Quinine is freely distributed to the natives, with instructions to the effect that it ought to be taken not only for the treatment of patients but as a prophylactic. These measures, supplemented by others, would serve to check this terrible scourge which was ravaging Madagascar.

International Congress of the "Gouttes de Lait."

The first International Congress of the "Gouttes de Lait" (institutions for supplying milk to young infants) will be held at Fécamp from Oct. 28th to 30th. The subjects of discussion given in the programme are: (1) Barlow's disease (infantile scurvy); (2) gastro-enteritis and sterilised milk; and (3) legislation relative to the sale of milk. A meeting will be devoted to the reading and discussion of communications submitted by individual members.

Murderous Assault on a Medical Man.

Dr. Vallon, medical officer of the Saint Anne Lunatic Asylum, whilst making his usual visit on Oct. 4th was stabbed in the back of the neck by a lunatic. The weapon was a small knife, having a blade about one and a quarter inches long and very sharp, firmly fixed in a handle. The assailant was a dangerous man who had been twice convicted but had not been punished as Dr. Vallon had certified him to be of unsound mind. It fortunately seems probable that Dr. Vallon's wound will have no serious consequences.

Oct. 11th.

Obituary.

EDWARD WILLIAM ORTON, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death took place on Oct. 7th, after a long period of failing health, of Mr. Edward William Orton of Bedworth, where he was in practice for many years and held several appointments. Mr. Orton was educated at Queen's College, Birmingham, and obtained the L.R.C.P. Edin. and L.M. and M.R.C.S. Eng. in 1870. He was a member of the British Medical Association, an honorary member of the St. John Ambulance Association, a certifying factory surgeon, medical officer and public vaccinator of the Bedworth district of Foleshill Union, physician to the Bedworth almshouses, and acted as surgeon to several collieries in the district. He was at one time assistant physician at the Droitwich Lunatic Asylum and resident surgeon of the Birmingham Lying-in Hospital. Mr. Orton leaves a widow, a son (Mr. Lionel E. Orton who has been practising with his father), and three daughters. The deceased took an active part in the affairs of his locality and was for many years a follower of the Atherstone pack of foxhounds. His brother, Mr. John Orton, M.R.C.S. Eng., of Foleshill, died within the last two years.

UMBERTO FLORA.

ONE of our Italian correspondents writes: The Tuscan school has lost one of its ablest representatives in Dr. Umberto Flora, professor of medical pathology in the Istituto di Studi Superiori of Florence. He was but 39 years old when he died but his record as student, as professor, and as consultant was fraught with achievement which would have redounded to the credit of years far more prolonged. Having graduated as Doctor of Medicine at Pisa in 1898 he was at once appointed to a lectureship in the local hospital of Santa Chiara, a post in which he acquitted himself so well that his promotion to others was immediate and uncontested. In 1900 Pisa was ravaged by typhoid fever and Dr. Flora, in conjunction with Professor Silvestrini, directed the local lazzaretto with energy and skill, working many cures and from time to time putting on record the results of his experience, which proved equally opportune and serviceable to his colleagues. In 1901 he became assistant to Professor Studiati in the Pisan chair of physiology, at the same time taking duty in the clinical wards, where he attracted the favourable notice of Professor Grocco, long the recognised head of the Tuscan school. Professor Grocco employed him in disciplining the students in diagnosis and therapeutics and found him so apt and successful a teacher that when called to the clinical chair in Florence he took Dr. Flora with him and in 1902 recommended him to the professorship of "Patologia Speciale Medica," a post he filled with signal acceptance till he died. The semeiology of the nervous system was a branch of research in which he achieved valuable results, embodied in more than one monograph, while his previous publication on "Myasthenic Reaction" continues to be profitable reading to many a worker in that field. A long and brilliant career seemed in store for him when, early last month, he was called to Treviso to attend his uncle, the Cavaliere Bellio, then dangerously ill. His assiduous devotion to the patient proved unavailing and he saw him carried to the grave, only himself to fall a victim to typhoid fever contracted during his service in the sick room. Every care was expended on the promotion of his recovery, his friends and colleagues, Dr. Federici and Dr. Stradiotti, reinforced by his beloved chief, Professor Grocco, taking daily and nightly turns by his bedside. But all in vain. His life of all too enthusiastic and unsparing effort had deteriorated a constitution never very robust and in the evening of Oct. 2nd he passed over "to the majority," lamented by a wide circle of compatriots and scarcely less by British and American colleagues who frequently met him in consultation and never without an enhanced appreciation of his gifts as a physician and as a man.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ivan Neiding, professor of forensic medicine in the University of Moscow.—Dr. Pauchon, a professor in the Marseilles School of Medicine.

VISIT OF FRENCH PHYSICIANS AND SURGEONS TO LONDON, OCTOBER, 1904.

MONDAY, OCT. 10TH.

ARRIVAL IN LONDON.

A REPRESENTATIVE and distinguished company of about 150 French physicians and surgeons from Paris and from various provincial centres in France arrived in London on Oct. 9th on a visit to the hospitals and the medical schools of the metropolis. The idea of the visit originated with Dr. Sillonville and the preliminary steps were, we believe, taken by him. The subject was then discussed in Paris and in London and met with such general approval that committees were formed in both these places. In Paris the committee included Dr. Triboulet (whose efforts to insure success have been indefatigable), Dr. Sillonville, Dr. Apert, and Dr. Launay. The London committee included amongst its members Sir William Broadbent (chairman), Sir Thomas Barlow, Dr. J. Dundas Grant (treasurers), Dr. Dawson Williams, Dr. W. J. Horne (secretaries), Mr. H. T. Butlin (dean of the Faculty of Medicine of the University of London), and members of the medical staffs of the various London hospitals and other representative men. We hope to take a later opportunity of alluding to the strenuous and very successful endeavours of these gentlemen to give our French colleagues a right hearty welcome. 24 ladies accompanied the party and amongst them was Madame Pefkine, a lady physician practising in Paris. Our visitors arrived at Charing Cross at 5 P.M. and were met by Sir William Broadbent and other members of the executive committee. At 8.30 on Sunday evening they were received at the Hotel Russell by the executive committee and their names and addresses were registered and every information and facility afforded them concerning the various hospitals or institutions which they specially wished to see. A large company was present and the meeting was of a very pleasant nature and undoubtedly a useful and satisfactory preliminary to the subsequent proceedings.

VISIT TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE HOSPITALS.

On Monday morning, Oct. 10th, the French physicians and surgeons repaired in force at the invitation of the President and Council of the Royal College of Surgeons of England to their College in Lincoln's Inn Fields. Mr. J. TWEEDY, the President, standing on the first landing of the staircase in the hall, attired in his presidential robes, with Mr. A. W. Mayo Robson and Mr. H. T. Butlin standing by his side, delivered the following address of welcome:—

Messieurs mes Confrères,—Au nom de la solidarité et l'universalité des sciences biologiques et medicales j'ai l'honneur de vous offrir une bonne reception au College des Chirurgiens d'Angleterre. Bien que nous parlions les langues differentes nous sommes tous membres de la même famille. Nous avons Asklepios pour père: nous sommes également les cohéritiers d'Hippokrates et de Galenos, et nous sommes tous les disciples de Paré et de Bichat; de Harvey et de Hunter, John Hunter, dont le génie se repand dans cette place. Welcome, gentlemen, to the Royal College of Surgeons of England.

M. LUCAS-CHAMPIONNIÈRE then stepped forward from the body of the hall and mounting a few steps towards the President said that it was his pleasant duty to acknowledge the cordial welcome which they had received and advised his countrymen to do their best to return to their own country with a knowledge of all that was best in English surgery.

Mr. TWEEDY again addressed those present saying that the Royal College of Surgeons had existed ever since the granting of the Charter by Edward IV. in 1461, the incorporation of the College taking place in the year 1800.

For the convenience of the visitors the company were then divided into four parties. The first was accompanied by Mr. Tweedy and the librarian to the council room and library where the historical records and relics were exhibited. A second party, under the charge of Mr. S. G. Shattock, the pathological curator, examined the Hunterian Museum. Mr. C. Stewart, conservator of the Museum, conducted another party, and Mr. R. H. Burne showed another group the collection devoted to comparative anatomy.

Charing Cross Hospital received a considerable contingent of the French visitors where they were welcomed by representatives of the staff and shown round the wards by Mr. Stanley Boyd.

LUNCHEON GIVEN BY THE EDITORS OF THE LANCET.

At midday on Monday, Oct. 10th, a luncheon was given by the Editors of THE LANCET to a party of our French medical *confrères*, the luncheon being held at the Imperial Restaurant. In the absence of Mr. Wakley, the chair was taken by Mr. Thomas Wakley, jun., and the following guests were present: Dr. Lucas-Championnière, Dr. Triboulet, Dr. Hallopeau, Sir William Broadbent, Dr. Marie, Sir Dyce Duckworth, Professor Baudry, Dr. Theodore Williams, Dr. Sabrazès, Sir Joseph Fayrer, Dr. Chauffard, Sir Anderson Critchett, Professor Poirier, Dr. George Ogilvie, Dr. Hugo-Marcus, Dr. Savariaud, Dr. Dawson Williams, Dr. W. Jobson Horne, Dr. Donald W. C. Hood, Dr. Boulloche, Dr. Blondel, Dr. W. Ewart, Dr. Forgue, Dr. A. S. Gubb, Dr. Huchard, Mr. D'Arcy Power, Dr. Mauclaire, Dr. Monprofit, Dr. Netter, Dr. Carnot, Dr. Fredet Dr. Wiart, Mr. S. A. Vasey, Dr. Maunoury, Dr. Lacronique, Dr. Boyd B. Joll, Dr. Chassevant, Dr. Sillonville, Dr. Crouzon, Dr. H. P. Cholmeley, Dr. Langenhagen, Dr. Teissier, Dr. Noguès, Dr. Soupault, Dr. Cunéo, Dr. Labey, Dr. Legry, Dr. Brindeau, Mr. George Pernet, Dr. Launay, Dr. J. Dundas Grant, Dr. Rochon-Duvignaud, Dr. Barlet, M. Villars, M. Mercadier, Dr. Apert, Mr. James Berry, Dr. J. L. Faure, Dr. Gaudier, and Dr. Guelliot.

Sir William S. Church, Dr. Herbet, Dr. Jacquet, Dr. Rénon, and Dr. Témoin, who had accepted invitations, were unavoidably prevented from being present.

The toasts of "The King" and of "The President of the French Republic," given by the CHAIRMAN, having been honoured,

Dr. GEORGE OGILVIE (physician to the French Hospital), in proposing the toast of "Our Guests," and speaking in French, made sympathetic reference to the absence of Mr. Wakley, who was, he said, "the *doyen* of the great medical journal, THE LANCET." He then read the following letter from Mr. Wakley:—

"THE LANCET, Oct. 10th.

"Gentlemen,—At my advanced age I make it a rule not to attend public meetings or social functions, so I am taking this mode of joining my son, who has the honour personally to receive you to-day, in offering you the heartiest of welcomes and the sincerest of hopes that your visit to London will prove pleasurable. For myself I know well that advantage may be derived from the study of medicine in another country, seeing that I was for nearly three years, after the completion of my medical training here, occupied in further study in the hospitals of Paris. Even now, after the expiry of 60 years, they are still fresh in my mind. Gentlemen, may you live many many years, and look back with pleasure to your visit to the hospitals and other medical institutions of London.—THOMAS H. WAKLEY."

He continued: "Our chairman, Mr. Wakley, jun., has asked me to say a few words of welcome on his behalf and to express the great pleasure which he feels in meeting you all here. The chairman has made this request under the impression that he cannot speak French and because he imagines that I can make myself understood in that language. I will do my best and although I may perhaps make some slips I will console myself with the reflection that the man who never makes a mistake will never make anything. I thank the chairman for the trust he has reposed in me, though I cannot but believe that someone else would have been able to interpret his thoughts in better chosen words. I hope that our guests have had a good passage and that they come to our little village with a good appetite and a good digestion—the latter is an excellent remedy against the English spleen—nay, more, a good digestion is always a proof of a pure conscience. I trust that your short stay in London will not be useless and that even if you return home without having greatly increased your medical knowledge you will in any case return to your own country with a firm belief in a lasting friendship between yourselves and your English colleagues. May that friendship become closer in the future and may that be one of the good results of *l'entente cordiale* between two great peoples. I wish you, in the name of the Editors of THE LANCET, health, prosperity, and long life."

On the proposition of Sir W. BROADBENT a congratulatory telegram was despatched to Mr. WAKLEY.

M. LUCAS-CHAMPIONNIÈRE, who spoke in French, offered his congratulations to the company on their visit to London—a city which he himself had visited many years ago. He felt sure that the more junior of his colleagues would obtain the greatest pleasure from their first visit to London. He continued: "We have all joined in drinking most heartily the health of the King and I well remember that when I was present at the International Medical Congress held in London in 1881 His Majesty—then Prince of Wales—spoke in terms which we can never forget and the memory of which we still cherish.[1] That, however, was 23 years ago and I see to-day that there have been many changes in London since. In those days I sat as a learner at the feet of Lord Lister and I carried back knowledge with me which has been not only to my own personal advantage but for the advantage of the whole of surgical science throughout France. I thank you, Sir, on behalf of my colleagues for the reception which you have given us and this meeting shows the power of British scientific journalism. With regard to the scientific press we in France are by comparison a small folk, but still, when the opportunity arises we shall certainly do our best."

Professor POIRIER, who spoke next, began by saying that he was the oldest graduate present of the University of Paris. He wished to bear witness to the valuable work which had been done all over the world by the scientific press, and especially in England, and he made a very complimentary reference to THE LANCET, saying that its reputation was as world-wide as the shipping of the country of its birth. "I hope," he continued, "that the work of science may be the means some day of bringing about union of all the people in the world as it is at present in promoting a happy understanding between the countries of England and France."

Dr. TRIBOULET, who followed, expressed the thanks of the visitors to the English Ladies' Committee for their efforts to entertain the ladies of their party and the next speaker,

Dr. MONPROFIT, as representing the provincial medical men of France, remarked that he was the only French surgeon present who was on the staff of a hospital founded by an English King—namely, the Hospital at Angers which was founded and endowed by Henry II., King of England and Duke of Anjou.

Dr. RAOUL BLONDEL, after thanking the Messrs. Wakley and "le grand journal, LE LANCET," for the kind words which they had just heard and their cordial reception, said that he spoke on this occasion as secretary-general of the International Association of the Medical Press. He spoke with all the more confidence because he was well acquainted with THE LANCET and its organisation and its work. It was the father of the medical press of all countries and it had rendered inestimable services to the great cause of public health. He drank to the prosperity of the medical press of Great Britain, especially of THE LANCET and its Joint Editor, their chairman.

The company shortly afterwards separated.

In the afternoon the hospital that attracted most of the visitors was St. Bartholomew's where Sir Dyce Duckworth, Sir William Church, and Sir Thomas Smith attended to accord a warm reception to their French *confrères*. Mr. J. Langton, Dr. Norman Moore, Dr S. West, Dr. J. A. Ormerod, Dr. H. Morley Fletcher, Dr. A. E. Garrod, Mr. W. Bruce Clarke, and Mr. D'Arcy Power conducted the visitors over the hospital.

The Hospital for Sick Children in Great Ormond-street was carefully inspected by many of the medical men from Paris especially engaged in the study of children's diseases. Dr. D. B. Lees, Mr. C. A. Ballance, Mr. W. Arbuthnot Lane, Dr. A. F. Voelcker, and Dr. R. T. Bakewell did the honours of the institution to the party and several interesting operations were witnessed. The Royal Free Hospital (London School of Medicine for Women) was also visited.

In the evening the French physicians and surgeons and the lady visitors were entertained at a pleasant and successful reception given by Dr. and Mrs. Dundas Grant.

TUESDAY, OCT. 11TH.

On Tuesday morning, Oct. 11th, a visit was paid to the French Hospital in Shaftesbury-avenue, where Dr. A. Vintras, Mr. Edmund Owen, Dr. G. Ogilvie, and Dr. H. Dardenne placed themselves at the disposal of the guests and showed them the institution.

A large number of the visitors also repaired to South Kensington to see the laboratories of the University of London. Dr. P. H. Pye-Smith, Sir Arthur Rücker, Dr. A. D. Waller, Dr. F. W. Pavy, Dr. N. H. Alcock, and Dr. W. L. Symes were present to conduct the visitors round the department. The visitors were much interested in hearing from Dr. Waller, who spoke in French, a description of the work carried on in electro-physiology. Dr. Waller also demonstrated an apparatus for the safe administration of chloroform. Two black cats were placed under the influence of chloroform and their speedy recovery to consciousness was noted, and some white rats also served to show how safe the method of giving chloroform was. Dr. Waller explained that the appliance was generally known as a Wick vaporiser. Another instrument for the safe administration of chloroform, invented by Dr. Dubois of Paris, was also explained and its use was demonstrated.

St. Mary's Hospital, Paddington, attracted the attention of a fair number of the visitors, where they were received by Sir William Broadbent, Dr. H. A. Caley, Mr. H. E. Juler, and Dr. S. P. Phillips. A particularly interesting demonstration was given by Dr. A. E. Wright who, speaking in French, described his treatment of tuberculosis by therapeutic inoculation of the corresponding bacterial vaccines. He showed a number of cases of tuberculosis in which the disease had been arrested by means of the inoculation, and the French physicians spent a considerable time in investigating the method and its results, being much struck by the favourable effects evidenced in some cases of extreme severity which had been considered incurable after treatment by the usual methods.

St. Mary's Infirmary at Highgate, which is one of the best equipped Poor-law infirmaries in this country, was visited by a few of the French physicians, and the Medical Superintendent, Dr. A. H. Robinson, found that he had to devote a considerable time to explaining the difference between a London hospital supported by voluntary contributions and a Poor-law infirmary, his visitors not desisting from questioning him closely until they had thoroughly mastered the details of the infirmary system of this country.

Queen Charlotte's Lying-in Hospital in Marylebone-road was visited by some members of the French contingent and Dr. W. R. Pollock and Dr. T. W. Eden were well occupied for some time in showing their visitors over the institution, special interest being evinced in the peculiar character of the midwifery training school which is attended by qualified medical men, medical students, midwives, and monthly nurses.

The Medical Graduates' College and Polyclinic in Chenies-street, Tottenham Court-road, being quite close to the headquarters of the visitors at the Hôtel Russell in Russell-square, came in for a large share of attention, and improved the occasion by making the French medical men honorary members of the Polyclinic during their stay in London.

LUNCHEON GIVEN BY MR. BUTLIN, DEAN OF THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LONDON.

Mr. Butlin, Dean of the Faculty of Medicine of the University of London, and Mrs. Butlin entertained the French visitors at a *déjeuner* in the Whitehall Rooms of the Hôtel Métropole, the guests numbering nearly 250. After the toast of "The King" and "The President of the French Republic" had been duly drunk with musical honours, Mr. BUTLIN, who was in the chair, submitted the toast of "Our Guests." Addressing the company in French, he pointed out that the Faculty of Medicine of the University of London was still in its infancy, having been in existence for only four years. The present visit was the first occasion that had offered itself for the opportunity of exchanging international courtesies. Much was said at the present time about universal peace and the methods of attaining such a desirable state of things, but this visit, so happily conceived and so spontaneous in its origin, would do more to promote friendship between England and France than treaties and negotiations. It was science which had brought about this fortunate occurrence because it knew not race, country, or limits. He congratulated the guests on braving the perils of the sea in their passage across the Channel and he applauded their courage in tasting English cooking and listening politely whilst their chairman maltreated the beautiful French language. He concluded by assuring them that

[1] Particulars of this Congress will be found in THE LANCET, August 6th, 1881, p. 245.—ED. L.

though he spoke French badly he drank their health with all his heart. The French visitors accorded the speech of the chairman a peculiar reception, known as a "ban," consisting of clapping the hands rhythmically for a certain number of times and somewhat resembling the method known as "Kentish fire."

M. LUCAS-CHAMPIONNIÈRE, replying in French, said that his present visit pleased him greatly because it was a renewal for a few hours of his youth when he visited England. Englishmen were considered in France as stiff but they had warm hearts. He hoped that they would all profit from their visit.

Professor POIRIER, who also spoke in French, supported the last speaker in expressing the thanks of the guests. He observed that many French medical men had been unable to come to England because of their professional duties and he eulogised the English hospitals and their methods. It was said in France that instruction was gained by travel and Englishmen must have travelled a great deal in order to have learnt so much. In France they were all more or less under the tutelage of the State but here in England individual effort and collective initiative were apparent in all they had seen. He refrained from comparing the French and the English hospital systems but it was quite clear that Republican France might well imitate in many points the noble traditions, the manners, and customs of monarchical England. The former speaker had mentioned that there was a legend in France about Englishmen being stiff but he had failed to find that this was so even after the most careful investigation. He pointed out that their very amiable and sympathetic reception was emphasised by the colours common to the two flags of England and France being mingled together on the very tables at which they were sitting. He sincerely trusted that their collaboration in science would result in an advance which would benefit all by securing general peace, health, and happiness. He concluded by asking those present to accept on behalf of the ladies of their party an appreciation of the courtesies which had been extended to them and he drank to the prosperity of the young and vigorous Faculty of Medicine of the University of London.

The afternoon was spent in visiting various hospitals.

At the Middlesex Hospital Mr. A. G. R. Foulerton was engaged explaining the serum treatment against puerperal fever. Dr. W. S. Lazarus-Barlow took the visitors through the cancer wards and Mr. Hillier's device for studying the development of organisms in microscopic slides was closely investigated. Professor Chassevant showed particular interest in this device and he was promised a full description of all the details of its construction as soon as it was published.

St. Thomas's Hospital received some 30 of the French visitors who were much impressed by the magnificence of the central hall, in which the treasurer, Mr. Wainwright, welcomed them. The wards and operating theatres were shown by Mr. H. H. Clutton, the senior surgeon, Dr. S. J. Sharkey, the senior physician, Mr. B. Pitts, Mr. G. H. Makins, Mr. W. H. Battle, and Dr. W. W. H. Tate. The tiled walls with pictures of fairy tales attracted the attention of many and high praise was accorded to the new out-patient department.

Guy's Hospital also found itself a centre of interest for a large number of the visitors, who, after being introduced to Mr. Cosmo Bonsor, the treasurer, in the board room, were conducted round the wards in small parties by Dr. F. Taylor and Mr. R. Clement Lucas, Dr. W. Hale White and Mr. C. H. Golding-Bird, Dr. G. Newton Pitt and Mr. W. H. A. Jacobson, Sir Edwin C. Perry and Mr. C. J. Symonds, Dr. L. E. Shaw and Mr. W. Arbuthnot Lane. The new Finsen light department and the actino-therapeutic apparatus under the care of Mr. G. Sichel gained much commendation.

The Royal Ear Hospital was visited by some of the visitors specially interested in otology and rhinology who found Mr. P. Macleod Yearsley the surgeon on duty at work in the wards. This gentleman showed the visitors round and explained the points of interest in the institution.

The London Hospital was shown to the visitors by Mr. F. Eve, Mr. J. A. Mansell Moullin, Mr. J. Sherren, and others of the staff. The out-patients' department, the Finsen-light department, and the massage rooms seemed to absorb much of the time of the visitors and the enormous number of patients and the practical manner of dealing with them greatly pleased those French surgeons and physicians who were accustomed to the Paris hospitals.

The Lister Institute of Preventive Medicine in Chelsea-gardens was visited and closely studied and the laboratories of bacteriological and chemical research work afforded many objects of importance for the consideration of the French visitors.

The Chelsea Hospital for Women was inspected by a small section of French medical men who were cordially welcomed by the hospital staff and shown round the institution. The new sterilising room was much admired and the very complete and modern appliances and arrangements in connexion with the operation theatre furnished so much of importance to discuss and to see that the visitors did not leave for some considerable time.

At Westminster Hospital many of the French surgeons gathered together to witness some operations performed by Mr. C. Stonham. Dr. W. H. Allchin and Dr. W. Murrell conducted some of their French medical brethren round the hospital and explained various matters of professional interest.

At St. Mark's Hospital for Fistula and other Diseases of the Rectum in the City-road a section of the visitors attended to see Mr. F. C. Wallis perform his modification of Whitehead's well-known operation. Some of the French surgeons present evinced great curiosity concerning the up-to-date operative equipment of this hospital and Mr. Wallis explained the special nature of the institution and its foundation.

St. George's Hospital was visited by most of the French party and the excellent appointments of this renowned school of medicine and surgery were greatly admired.

WEDNESDAY, OCT. 12TH.

On Wednesday, by command of the King, an intimation was conveyed to the French visitors that His Majesty had graciously given his permission for them to see the King Edward VII. Hospital for Sick and Wounded Officers which was founded by Miss Keyser (Sister Agnes) in Grosvenor-gardens. Miss Keyser has nursed the cases there with a staff of five nurses and the French visitors praised the home-like surroundings of the institution, which, nevertheless, lost nothing in utility by the comforts of the wounded officers receiving more attention than it is usually possible to supply in a hospital.

The laboratories of the Imperial Cancer Research Fund, situated at the Examination Hall on the Victoria Embankment, were visited by many of the French physicians and surgeons, amongst them being Dr. R. Simon, Dr. Gaston, Professor Legry, Professor Reynier, Professor Netter, Dr. Hugo Marcus, Dr. Garnier, and Dr. Triboulet. The party were received by the director of the Central Laboratory, Dr. E. F. Bashford, and Dr. Murray who were assisted by Dr. Lavaditi. Dr. Bashford explained that the object of the institution was to place the investigation of cancer upon a uniform scientific basis throughout the British Empire and in this manner to utilise the opportunities afforded by India, the colonies, and the various protectorates for ascertaining the nature of the incidence of cancer in different native races and in widely separated geographical areas. In this research work especial weight was attached to the study of cancer in the lower animals, domesticated and wild, and a farm for the accommodation of larger animals was maintained. The details of all cases of cancer occurring in the great London hospitals were tabulated uniformly and, in addition to statistical work, the investigations consisted of experimental and histological work on the nature and processes of growth and on the diagnosis and treatment of cancer. These studies were carried out by a scientific staff representative of the biological, pathological, chemical, and statistical aspects of the work. The party found much of interest in the various specimens of cancer in animals, those illustrating the disease in fish and mice attracting considerable notice.

Dr. F. W. Mott at Claybury Asylum had a busy day showing a group of interested French visitors the pathological laboratory of the London County asylums. A luncheon, provided by Mr. E. J. Horniman, chairman of the pathologist subcommittee, was served in the nurses' recreation room with the permission of the medical superintendent.

The Royal Free Hospital in the Gray's Inn-road, with its special associations with the teaching of medical women, was

visited by many of the guests who were struck by the principle followed at that institution of free admission of sick people, no letters of recommendation being issued.

Amongst the other hospitals and institutions visited were the Samaritan Free Hospital, the Victoria Hospital for Children, the Royal London Ophthalmic Hospital, the Hospital for Consumption, Brompton, the Alexandra Hospital for Children with Hip Disease, the West London Hospital and Post-Graduate College, University College Hospital, and the Royal Societies Club.

BANQUET TO FRENCH PHYSICIANS AND SURGEONS BY THEIR ENGLISH COLLEAGUES.

The banquet given to the French physicians and surgeons by the London executive committee took place on Wednesday night, Oct. 12th, at the Hotel Cecil, London, Sir W. Broadbent being in the chair. On the right of the chairman were seated: La Premier Secrétaire, Ambassade de France, the Duke of Abercorn, K.G., Professor Poirier, the President of the Royal College of Surgeons, Dr. Triboulet, Sir Douglas Powell, Dr. Alan Herbert, Mr. J. Hutchinson, Dr. Pavy, Dr. Sabrazès, the Vice-Chancellor of the University of London, Dr. Lacronique, Sir Anderson Critchett, Dr. Maunoury, Mr. Edmund Owen, Professor Cunéo, Professor Fabre, Dr. Theodore Williams, Dr. Jousset, Mr. Makins, Dr. Palle, Dr. Dutil, Dr. Hermann, Dr. Ducamp, Mr. Golding-Bird, Dr. Hervé, Dr. Caley, Dr. Presch, Dr. Cheadle, Dr. Dransart, Dr. Crocker, Dr. Hallopeau, Dr. Pringle, Dr. Jacquet, Dr. Buzzard, Professor Marie, Professor Ferrier, and Dr. Hale White. To the left of the chairman were seated: M. Lucas-Championnière, the President of the Royal College of Physicians, Professor Chauffard, Sir Dyce-Duckworth, Dr. Huchard, Sir Joseph Fayrer, Professor Baudry, Professor Howard Marsh, Professor Lepage, the Dean of the Faculty of Medicine of the University of London, Professor Chambrelent, Dr. Frederick Roberts, Professor Carnot, the Principal of London University, Professor Teissier, Sir William Bennett, Dr. Felizet, Mr. Horniman, Professor Mauclaire, Mr. Watson Cheyne, Sir Thomas Smith, Sir Patrick Manson, Dr. Adler, Dr. P. Abercrombie, Dr. Apert, Dr. Anderson, Dr. Barrabe, Dr. Baker, Dr. Barrié, Mr. Barker, Mr. Barnard, Dr. Béchet, Dr. Bashford, Dr. Bensaude, Dr. Bastian, Dr. Birand, Mr. Battle, and amongst others present were Dr. Faure, Dr. Mitchell Bruce, Dr. Delamerre, Mr. Godlee, Dr. Girou, Dr. Guillaume-Louis, Mr. Mayo Robson, Dr. Sharkey, Dr. Angibaud, Mr. Walter Spencer, Mr. Symonds, Dr. Rénon, Dr. Ewart, Dr. Savage, Dr. Schmitz, Dr. Lequeux, Dr. Frederick Taylor, Mr. Wallace, Dr. Dufournier, Dr. Goodhart, Dr. Dupius, Dr. Témoin, Dr. Risien Russell, Dr. Wiart, M. Reynier, Dr. Cazes, Mr. Herbert Page, Dr. Monprofit, Dr. Newton Pitt, Dr. Renaud, Dr. Villaret, Dr. Saint-Cène, Dr. Dundas Grant, Dr. Horrocks, Dr. Mergnat, Mr. Keetley, Dr. Le Martin, Dr. Percy Kidd, Mr. A. W. Lane, Mr. Lockwood, Dr. Nitot, Mr. Lucas, Dr. Luff, Mr. Herbert Spencer, Dr. Chassevant, Dr. Boyd Joll, Dr. Grinda, Dr. Penrose, Dr. Dineur, Dr. Dupane, Dr. Juyot, Dr. Pierre, Dr. Guyot, Dr. Noguès, Dr. Boulloche, Dr. Sillonville, Dr. Langerhangen, Dr. Herringham, Dr. Edouard Janicot, Dr. Janicot, Dr. Monard, Mr. Stephen Paget, Dr. Netter, Dr. Pamart, Dr. Pautrier, Mr. Kiallmark, Dr. Michon, Dr. Dawson Williams, Dr. Pochon, Dr. Poix, Mr. Langton, Dr. Rabat, M. Huguenet, Dr. Raulin, Dr. Tate, Dr. Robert-Simon, Dr. Rochon-Duvigneau, Dr. Murrell, Dr. Scherb, M. Pondepeyre, Dr. Cazels, Dr. Legry, Dr. Surre, Mr. F. C. Wallis, Dr. Hugo Marcus, Dr. Antonelli, Dr. George Ogilvie, Dr. Simon-Clement, Dr. Surmont, Dr. Soupault, Dr. Fredal, Dr. Lardennois, Dr. Garrod, Dr. Gastou, Dr. Lemaire, Mr. Marcus Gunn, Professor Waller, Mr. T. Wakley, jun., Dr. Magdelaine, Dr. Malherb, Dr. Schlemmer, Dr. Mondot, Dr. Savariaud, Dr. Barlet, Dr. West, Dr. Tallaye, Dr. Mott, Dr. Tissier-Guy, Dr. James Taylor, Dr. Fixier, Dr. Jarvis, Dr. Madeuf, Mr. Jessop, Dr. Lutard, Dr. Jakins, Dr. Lièvre, Mr. J. Hutchinson, jun., Dr. Letoux, Dr. R. Hutchison, Dr. Léri, Dr. Le Clerc, Dr. Launay, Dr. Habershon, Dr. Gubb, Dr. Jobson Horne, Dr. Herard de Bessé, Dr. Jeannel, Dr. James Galloway, Dr. Leonard Williams, M. Bouteron, Dr. Gajabin, Dr. Labey, Dr. Lartet, Dr. Laporte, Mr. Eve, Dr. Guisez, Dr. Gugliemetti, Dr. Guelliot, Dr. Gaudier, Mr. Eastes, Dr. Garnier, Dr. Estrabaud, Dr. Esmonet, Dr. Carra, Dr. Donald Hood, Mr. Stanley Boyd, Dr. Crouzet, Dr. Thiéry, Dr. Touchard, Dr. Vaudremer, Dr. Ormerod, Dr. Walther, Mr. de Batz, Dr. Boeteau, Dr. Legros, Dr. Louis Vintras, Dr. Debout d'Estrees, Dr. Courtade, Dr. Choppin, Dr. Cayla, Dr. Casse, Dr. Briand, Dr. Tirard, Mr. Bidwell, Dr. Bossan, Dr. Bobrie (fils), Dr. Bobrie, Dr. C. Beevor, Dr. Blondel, and Mr. D'Arcy Power.

At the end of the dinner the CHAIRMAN proposed "The King" as follows:—Messieurs mes confrères français et anglais,—Mon premier devoir est de vous prier de boire à la santé du Roi, mon maitre. Il serait bien assez de dire tout simplement "Le Roi," comme l'a fait mes collègues, M. Butlin hier et M. Wakley avant-hier; ce serait même la manière la plus effective de presenter ce toast, mais je demande la permission d'ajouter quelques paroles. Nous avons bien le droit d'être fiers de notre Roi; comme Prince de Galles il s'est fait une haute idée de ses devoirs envers la nation et il s'est dévoué à son service, mais il a fallu le champs d'action plus large, la haute position du trone, pour montrer a la vue du monde entier les qualités d'un grand homme d'état, pour developper ses idées vraiment royales et pour exercer les vertus mâles et positifs du monarque. Vous ne savez probablement pas que sa Majesté est médecin et chirurgien. Je ne dis pas qu'il exerce, mais il a fait l'honneur aux deux collèges de médecine et de chirurgie d'accepter les titres de Honorary Fellow of the Royal College of Physicians et de Honorary Fellow of the Royal College of Surgeons, et il prend ses devoirs très à cœur, s'occupe de tout ce qui appartient aux sciences médicales et à la santé publique. Sa Majesté est patron et a été le Président de l'Association Nationale contre la tuberculose, le patron aussi du Cancer Research. De plus il prête son influence puissante et une assistance materielle très importante aux hôpitaux de Londres. Il a eu la grande et belle idée d'instituter le King Edward VII. Hospital Fund qui leur distribue £50,000 par an. Il n'est pas nécessaire de vous dire combien notre Roi aime la France; c'est entendu de tout le monde. Sa Majesté connait bien son Paris, et s'est souvent promené incognito sur les boulevards, souvent aussi il a assisté aux courses des yachts sur le littoral de la Méditerranée. Il a témoigné son intérêt dans votre visite par le telegramme que j'ai eu l'honneur de recevoir.

Here the CHAIRMAN read the following telegram from Lord Knollys: "I am commanded by the King to inform you that he has noticed with great satisfaction that so large a number of French medical professors, physicians, and surgeons have come to England to inspect the hospitals in London. His Majesty has always taken a warm interest in these institutions. He has observed therefore with much gratification the success which has attended the visit of these gentlemen and he hopes that mutual benefit to both countries will ensue from it. The King remembers with great pleasure that on the occasion of the International Medical Congress in London he had an opportunity of making the acquaintance of their distinguished countryman, the late M. Pasteur."

This telegram was greeted with loud and prolonged acclamation, the following reply being sent: "Au nom des médecins Français venus à Londres le Professeur Lucas-Championnière, President, et les Professeurs Huchard, Poirier, et Chauffard de la Faculté de Médecine de Paris, prient sa Majesté d'agréer l'expression de leurs sentiments les plus respectueux et la remercient de son gracieux message."

[Resuming his speech the CHAIRMAN continued:]

Mais sa Majesté a des droits encore plus sérieux et plus élevés à notre admiration et à notre révérence. Il y'avait un moment où de sombres nuages se sont montrés dans l'est; il était à craindre que les sentiments des deux nations ne suiverent nos alliances opposées; alors le Roi a fait sa memorable visite à Paris; il s'est fait le paratonnerre de l'Europe, l'orage a été conjuré. Le Roi a déjà gravé son nom sur la page de l'histoire, Edward VII. the Peace Maker. Mais si vous voulez bien regarder les livres sterling que vous portez tous dans vos poches—dont j'espère que vous avez même plusieurs quoiqu'ils coûtent 25 francs et quelque sous—vous verrez cette légende Edwardus Septimus Dei Gratia Omnium Britanniarum Rex, Indiae Imperator. Vous pouvez donc républicains convaincus crier ici, Vive l'empereur. En tout cas je vous engage de boire de tout votre cœur à la santé du roi.

After the toast had been duly honoured the Chairman added: Je veux ajouter un petit post-scriptum au toast que vous venez de célébrer. A la Santé de la Reine—toujours jeune, toujours très jeune—toujours belle, toujours très belle—toujours gracieuse, toujours très gracieuse. A la Santé du Prince de Galles et de la Princesse de Galles, à la Santé de Toute la Famille Royale.

The CHAIRMAN again rose and proposed "The President

of the French Republic" in the following terms: Gentlemen,—We have just drunk with enthusiasm the health of the King and of the Royal Family; I have now the honour to propose a toast which I am sure you will receive with corresponding enthusiasm, the health of the President de la République Française. Every seven years France chooses from among her citizens a man whom she delights to honour, one who has served her well, for whom she has the highest respect and from whom she expects the greatest service, and places him at the head of the State, makes him President of the French Republic. From that moment he represents the might and majesty of France and takes his place with emperors and kings. This high position is at present held by M. Loubet and we have seen with what dignity he has upheld the honour of France at St. Petersburg, at home, and in London. No royal visit ever commanded greater interest than that of President Loubet to London, and whether in royal palaces or as a simple citizen driving his modest phaeton in the Champs Élysées he commands our admiration. Gentlemen, the health of M. Loubet, President de la République Française.

This toast was acknowledged by M. DAESCHNER, first secretary of the French Embassy, who thanked Sir William Broadbent for the terms in which he had proposed the health of the President and for the cordial manner in which he himself had been alluded to. The President would add this to the souvenirs he had taken back with him of the cordiality which had characterised his recent visit to London. He had been requested by the Ambassador to express his regret at having been prevented from assisting at this fête and he had asked him to express the interest that he took in an undertaking which brought together the medical profession of the two countries.

The CHAIRMAN concluded by bidding the guests *au revoir* in the following words:—Mes collègues et confrères français,—Au nom des convives autour de ces tables—au nom des médecins et chirurgiens d'hôpital de Londres—au nom du monde médical entier de notre pays, je vous dis "Welcome." Vous avez déjà entendu le mot "welcome;" j'espère, je suis sur, que vous en avez senti la signification et la realité depuis lundi matin quand le Président et le Conseil du Royal College de Chirurgiens se sont réunis pour vous recevoir, jusqu'à ce soir où nous devons nous dire adieu. Ce n'est pas le moment de peser les résultats de la visite amicale que vous nous avez fait l'honneur de nous faire. Il en est un qui est certain—c'est de serrer encore plus étroitement les liens intellectuels de respect et d'admiration mutuels qui nous unissent déjà et d'en ajouter un autre, un lien du côté du cœur, de sympathie et d'affection. L'entente cordiale médicale entre la France et l'Angleterre existe depuis bien longtemps, nous avons dépassé de beaucoup cet étage de l'amitié. C'est une vraie fraternité qui existe entre nous—nous sommes de la même famille scientifique; continuons de chercher et poursuivre donc ensemble la verité, de nous rivaliser dans nos efforts pour avancer la science, et surtout de travailler pour le soulagement de nos frères souffrants. Au revoir.

Dr. GEORGE OGILVIE proposed the toast of "Our Guests" as follows:—

Monsieur le Président et Messieurs,—Il faut que je remercie d'avance mes collègues anglais de l'honneur qu'ils m'ont fait de me charger de l'organisation du banquet, et de porter le toast à nos invités. Messieurs, vous avez dû remarquer que le menu présente un choix exclusif de mets anglais, que nous avons abondamment arrosés de vins français, pour les rendre moins lourds. Et vous avez vu, sans doute, que j'y ai mis en bonne place, le fameux jambon d'York, mais le comité a pensé qu'il fallait y ajouter un large morceau de langue—écossaise. Pour cette raison ils ont fait choix de ma petite personne. En plus, mon titre d'Ecossais vous rappelera certainement les liens antiques qui rattachaient l'Ecosse à la France. Ces liens faisaient présager ceux qui existent heureusement à cette heure entre votre pays, Messieurs, et le nôtre. Messieurs, vous avez quitté la belle France et la ville lumière, le pays de Molière, de Laplace, et de Pasteur. Et vous voici dans notre petite île, la ville aux brouillards, mais le pays de Shakespeare, de Newton, et de Jenner. Vous pensiez peut-être trouver ici de froids anglais. Vous avez été désappointés j'espère, et vous avez vu dans notre réception tout notre désir de vous témoigner notre cordialité, et notre bonne camaraderie. Car nous sommes tous médecins—non des morticoles, dont on a dit "leur seule fin est de constater"—mais nous puisons dans notre cœur des sentiments humains pour ceux qui souffrent, car nous savons si c'est la curiosité des maladies qui fait le savant, c'est l'amour des malades qui fait le médecin. J'espère donc que votre venue parmi nous ne vous aura pas été inutile, que vous aurez tiré quelque profit de votre visite à nos musées, nos hôpitaux, et nos laboratoires, et que vous n'êtes pas encore en proie à une nostalgie à l'état aigu. On a dit souvent qu'il n'y à point de frontières pour la science. Quand deux pays comme la France et l'Angleterre sont liés par une entente cordiale, l'union est encore plus complète entre ceux qui, comme nous, travaillent pour le soulagement de leurs semblables, et à l'extension progressive de leur pouvoir scientifique. Messieurs, je regrette de ne pouvoir porter le toast avec la verve gauloise du Professeur Poirier, mais j'ai tâché le faire avec cette fougue impétueuse qu'on appelle chez nous *ingenium perfervidum Scotorum*, et je lève mon verre à l'union entière des médecins français et des médecins anglais, qu'ils continuent à marcher la main dans la main, n'ayant qu'un seul but, la grande cause de l'humanité.

This toast was replied to by M. LUCAS-CHAMPIONNIÈRE, who said that after so many brilliant receptions he found it difficult to find terms that would adequately convey their thanks. He had already had occasion to appreciate the King's interest in medical matters at the Congress of 1881. He recalled the fact that as a young surgeon he had been hospitably received by Mr. (now Lord) Lister, at Edinburgh. He was accustomed to say that Lister did not improve surgery but had created it and this was the simple truth. He thought the two countries were destined to become perfectly united not only politically but scientifically, a union that was based on their differences. He concluded his remarks by a few words in English hoping that his fellow visitors would carry back to France as favourable an impression of the English people as that which he himself had formed in the days of his youth. He expressed on behalf of them all their heartiest thanks coupled with the hope of future meetings not only at Paris but elsewhere.

This toast was also responded to by M. HUCHARD, in the following terms: M. le Président, M. le Duc, Messieurs,—C'est à Sir William Broadbent, le dévoué président du comité anglais de cette inoubliable réception, c'est au médecin partout aimé et partout respecté, c'est à tout le corps médical de Londres et de l'Angleterre, dont il personnifie si hautement la science et l'honneur, que j'apporte le salut reconnaissant et amical des praticiens français. Je dis "praticiens," parce que je ne désire être le porte-paroles, ni d'une université, ni d'une académie, ni du corps médical des hôpitaux, mais des médecins de notre pays. Ils ont tous un titre égal à vos yeux comme aux nôtres, puisque tous ils aiment avec la même sincerité, avec les mêmes vibrations du cœur, nos chers confrères anglais. Nous sommes venus ici les mains tendus vers vous, parce que nous aussi, nous avons voulu, par notre présence, consacrer en quelque sorte cette entente cordiale dont la nouvelle a été partout accueillie avec bonheur et avec reconnaissance; avec une infinie et une très respectueuse reconnaissance pour votre auguste Souverain dont la parole royale vient d'être entendue avec tant de recueillement, dont le nom sera grand dans l'histoire parce qu'il aura aimé les fécondes et calmes conquêtes de la paix! Nous nous réjouissons du mémorable évènement qui rapproche en même temps les médecins de deux pays. Nous n'ignorons pas qu'il y a de par le monde des alliés qui ne s'entendent pas toujours d'une façon absolument cordiale, tandis que ceux qui commencent par s'entendre sur tout ce qui peut les diviser, sont forcément plus et mieux que des alliés: des amis. Et, entre médecins, cette amitié procède souvent d'abord d'une certaine communauté de travaux, comme le démontre le fait suivant que vous me permettrez de vous rappeler, mon cher Sir Broadbent, ne serait-ce que pour vous rendre la justice que vous vous refusez trop généreusement à vous-même. Il y a quelques semaines sans avoir encore l'honneur d'être personnellement connu de vous, vous avez bien voulu m'écrire spontanément que vous partagiez mes idées sur le rôle considérable de l'hypertension arterielle dans la production de nombreuses maladies; votre grande modestie unie à trop de bienveillance vous a fait commettre une erreur: c'est nous qui partageons vos idées, et il y a plus de vingt années, alors que nous commencions nos recherches à ce sujet, vous nous aviez déjà revélé quelques-uns des dangers de cette hypertension. Et c'est ainsi que, comme M. Jourdain faisait autrefois de la prose sans le savoir, nous avons fait ensemble de la bonne et scientifique diplomatie sans nous en douter, puisque l'entente cardiaque

entre nous a de longtemps précédé l'entente cordiale. Peut-il en être autrement, et la science n'est elle pas la grande diplomate qui unit les peuples au lieu de les separér, comme le rappelait encore hier votre vénéré doyen, M. Butlin, avec la belle simplicité d'une éloquence inspirée par son cœur: La science est la force, parce qu'elle est la douceur; elle est, elle doit être, la messagère de la paix parce qu'elle veut adoucir et constamment épargner les vies humaines, et les frontières des nations s'aplanissent sur son large horizon, toujours infini; de sorte qu'une seule chose, que la houle rend parfois un peu amère, nous sépare maintenant: le Pas de Calais, à moins qu'un jour une communication plus facile et plus clémente pour certains estomacs parvienne à nous réunir plus complètement encore. Alors, à ce moment comme autrefois un de nos rois s'ecriait: "Il n'y a plus de Pyrénées" nous pourrons dire à notre tour: Il n'y a plus de Pas de Calais, ni de ligue contre le mal de mer. Mais, je m'arrête, ayant déjà dépassé le limite de la brièveté qui est "l'âme de l'esprit" comme un de vos proverbes le dit si bien. Brevity is the soul of wit. Laissez-moi, gentlemen, terminer par un souvenir qui ne peut vous être désagréable, et par une espérance qui remplit nos cœurs d'allégresse. Il y a quelques années—c'etait vers l'an 1066, si je me rappelle bien—il parait qu'avec Guillaume de Normandie nous vous avons un peu conquis, ce qui prouve que les ancêtres de nos familles datent d'assez loin. Et voilà que, depuis longtemps déjà qu'aujourdhui surtout, par une véritable et délicate pensée de réciprocité, vous nous avez tous conquis à notre tour, de la façon la plus aimable, de la façon la plus charmante. La première conquête est perennisée depuis près de 900 ans, que la seconde conquête ait une égale durée! C'est notre vœu le plus cher, notre plus ardent souhait; c'est là notre ferme espérance!

Dr. P. H. PYE-SMITH, the Vice-Chancellor of the University of London, who spoke in French, said: I have the honour to propose the toast of "The Faculty of Medicine of Paris," an ancient and illustrious body that has always stood foremost in our commonwealth and is to-day as vigorous as ever. It recalls the names of Ambroise Paré, of Pecquet, of Astruc, Réaumur, Bichat, Laennec (with his happy citation of the dictum of Hippocrates, *Pouvoir explorer est à mon avis une grande partie de l'art*), Andral, Cruveilhier (*Virgilium vidi tantum*), and those whom I had the privilege to learn from—Velpeau and Bouillaud, Claude Bernard, Trousseau, Hardy, and Charcot. I speak of those only who are no longer with us, but around these tables we see ample proof that the great traditions of the Faculty of Paris are worthily upheld by those who carry on the torch of science to enlighten and of sympathy to warm.

Et quasi cursores vitai lampada tradunt.

But it is not only as comrades, to whom we open freely, as they always do to us, whatever improvements we make—for there are no secrets in our honourable profession—it is also as representatives of the noble nation of the French that we greet our visitors. "France, our sweet enemy," was Sidney's harshest term; and, in the frequent wars which taught each nation to view the other "with the stern joy that warriors feel in foemen worthy of their steel," there were numberless instances, from Poictiers to Fontenoy, of this mutual respect. Let me recall only two. On the bloody field of Salamanca two squadrons met and a French trooper raised his sabre to cut down an English officer, but seeing that he had already lost an arm the gallant Frenchman lowered his sword to the salute and passed on to find a less defenceless foe. At the Guildhall banquet which celebrated the coronation of our late beloved Queen Victoria, it was the Duke of Wellington who proposed the health of the Ambassador of France, his redoubtable adversary on many a contested field but then his honoured guest at Apsley House, Marshal Soult. May I adapt these lines from Béranger?

"J'ai vu la Paix descendre sur la terre,
Semant de l'or, des fleurs et des épis;
Ah, disait-elle, égaux par la vaillance,
Français, Anglais, Russe, ou Germain,
Peuples formez une sainte alliance,
Et donnez vous la main!"

This meeting will, I am persuaded, foster the good understanding now so happily established between the two nations; for to know Frenchmen better is to esteem them more highly and to converse with French ladies is a liberal education. You know the charade: "Mon premier est le premier de son espèce, mon second n'a pas de second, mon tout—je ne puis pas vous le dire."—Messieurs et confrères, I will not say Adieu, I will say, Au revoir.

This toast was acknowledged by Professor POIRIER who speaking in French, said that since the hour of separation was approaching he wished frankly to draw the balance-sheet of their excursion. He assured them that they left with regret; they had seen so much that was interesting and admirable, so much that was instructive, that they felt that much must remain in the immensity of this huge metropolis more interesting, more instructive still, which it would be to their advantage to see. The time had been so short, the three days had passed like lightning. Really it was too short. It remained for him to express their admiration for the various institutions they had visited, to enumerate which alone would require too much time. He might, however, mention one or two of the things that had struck them more particularly—namely, the practical character of the institutions and the magnificent results of individual and collective initiative allied with the profound respect of the English people for religion and tradition. The sight of the wards embellished with flowers and the charming figures of the graceful nurses impressed them profoundly. It was impossible to do justice to the friendly character of the reception for the French language lacked adjectives adequate to the occasion. They could not hope to receive their English friends in a manner at all comparable to the present but they would do their best. Though these sentiments had to pass from the lips they came from the heart, not from the pericardium but from its most intimate structure. He had to finish by a toast, though he questioned whether this was favourable to the *entente cordiale* of English dishes and French wines, but he would ask them to join him in drinking to the fertility of the union which united them against barbarism, ignorance, intellectual and physical poverty, and to the progress of humanity.

This toast was also replied to by Professor CHAUFFARD who said that, speaking on behalf of the professeurs agrégés de la Faculté de Paris, he begged to tender their deep gratitude for the magnificent reception. Their brief sojourn here would leave a permanent impression. There was but one medical science common to them all but medical and surgical practice differed, each people understanding and applying it in its own manner. The English were essentially a practical people who sought and who found the simplest means of attaining the object in view. This was everywhere visible in their hospitals. The Englishman carried everywhere his love for home life and their hospital patients seemed to be members of a family. They were considered not as pathological cases but as unfortunate brethren and as if it were their duty first to care for and then to love them. Their wards were a pleasant sight—so clean, so homely, beautified by flowers and the smiles of the charming nurses. He concluded by inviting them to drink the health of the chairman of the executive committee, of Dr. Ogilvie, and of the many distinguished physicians and surgeons who had organised the fête, and also the progress and greatness of the Faculty of Medicine of the University of London.

The health of the chairman was proposed by Dr. TRIBOULET who said that the idea of this excursion originated with Dr. Sillonville and fell on a soil admirably prepared to enable it to develop into this remarkable reunion. These meetings would do more to unite the two peoples than all the efforts of engineers to do away with the English Channel. He concluded by a few words in English in which he asked them to drink to the English executive committee, also to the English ladies, to whom he tendered the assurance of "ces sentiments très plus profond."

The CHAIRMAN briefly acknowledged the toast and then the company separated.

During the course of the banquet a congratulatory telegram was received from the members of the Continental Anglo-American Medical Society, assembled at their annual meeting in Paris.

THE LADY VISITORS.

The reception and entertainment of the lady visitors were under the supervision of a committee of English ladies who were indefatigable in their efforts to secure the well-being and happiness of their guests.

ST. PETERSBURG SOCIETY OF MEDICAL MEN.—This society, says the *Novoe Vremya*, entered on its seventy-second year of existence last month and its annual meeting was held on Sept. 29th. It was chiefly taken up with reports by members of the doings of the society during the past 71 years.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination the following candidates passed in the subjects indicated:—

PART II.

Anatomy.—L. W. Bradshaw, Leeds; A. C. Dickson, Guy's Hospital; J. W. Harrison, St. Mary's Hospital; L. R. Nézet, Edinburgh; H. N. Ritchie, Sheffield; and N. C. Wallis, London Hospital.

Physiology.—R. Beesley, Manchester; L. W. Bradshaw and T. P. Braim, Leeds; J. W. Harrison, St. Mary's Hospital; W. P. Pinder, Leeds; H. N. Ritchie, Sheffield; and N. C. Wallis, London Hospital.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.—The following candidates have passed the preliminary examination:—

Miss Harriet MacFaddin,* E. C. Deane,* J. F. Gibbons,* J. M. Gage,* N. Purcell,* J. J. Clarke, H. Gray, J. T. Heffernan, B. Hill, H. Hunt, W. R. Kelly, C. Kelsall, E. P. McSweeney, W. R. O'Keeffe, W. P. H. Parker, T. A. Peel, C. D. K. Seaver, H. B. Smyth, P. T. Warren, and Miss C. F. Williamson.

* With honours.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Ernst Wolfflin has been recognised as *privat-docent* of Ophthalmology; Dr. Wilhelm Falta as *privat-docent* of Internal Medicine; and Dr. Sergius Soltykoff as *privat-docent* of Pathological Anatomy and General Pathology. Dr. Eugen Enderlen of Marburg has been appointed to the chair of Surgery in succession to Dr. Hildebrand who goes to Berlin.—*Berlin:* Dr. Bremer, *privat-docent* of Otology, and Dr. S. Levy, *privat-docent* of Paediatry, have been granted the title of Professor.—*Cornell (New York):* Dr. Adolf Meyer has been appointed to the chair of Psychiatry in succession to Dr. A. M. L. Hamilton, resigned.—*Freiburg:* Dr. Eugen Fischer, *privat-docent* of Anatomy, has been promoted to an Extraordinary Professorship.—*Greifswald:* Dr. Ernst Schultze of Bonn has been appointed Extraordinary Professor of Psychiatry.—*Lausanne:* Dr. Galli-Valerio, Extraordinary Professor of Hygiene, has been promoted to an Ordinary Professorship.—*Moscow:* Dr. Chirvinsky, Extraordinary Professor of Pharmacology, and Dr. Gulévich, Extraordinary Professor of Physiological Chemistry, have been promoted to Ordinary Professorships.—*Vienna:* Dr. August von Reuss, Extraordinary Professor of Ophthalmology, has been promoted to an Ordinary Professorship. Dr. Friedrich Schlagenhaufer, *privat-docent* of Pathological Anatomy, and Dr. Max Neuburger, *privat-docent* of the History of Medicine, have been promoted to Extraordinary Professorships. Dr. G. Jovannovicz has been recognised as *privat-docent* of General and Experimental Pathology.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The annual dinner of this society was held at the Café Monico, Piccadilly-circus, London, W., on Oct. 7th, when about 50 members and guests were present. The chair was taken by Mr. E. F. White, the President. The loyal toasts having been duly honoured, the toast of "The Society" was proposed by Dr. W. H. Allchin and responded to by the President. Surgeon-Major Mark Robinson proposed "Our Kindred Societies and Visitors," to which Sir R. Douglas Powell and Mr. F. F. Burghard replied. The toasts were interspersed with musical and humorous recitals and exhibitions of sleight of hand and a very agreeable evening was spent.

LIMITATIONS TO THE USE OF AGAR-AGAR AND GELATIN IN RUSSIA.—The admission of agar-agar into preserves has been the subject of considerable discussion amongst certain Russian authorities. It was raised by the Minister of Agriculture who thought that the use of this foreign substance would interfere with the consumption of home-grown fruits. The members of the Ministerial committee found it necessary to forbid the use of agar-agar in the preparation of jams and to increase the import duty on it. Owing to its cheapness and the various and extensive uses to which it is put a special committee of the Technical Society was appointed to clear up the question as to its being harmful or not. This committee concluded that agar-agar did not affect fruit so much as gelatin in that being non-azotic it was not liable to prejudicial fermentation, as is the case with gelatin. The members of the committee of the Ministry of Agriculture, however, did not share this view, says the *Novoe Vremya*, and held to their original finding, but supplemented it thus: "In the preparation of jams neither foreign agar-agar nor home-made gelatin may be used."

PRESENTATION TO A MEDICAL PRACTITIONER.—At the presentation of the certificates to the successful members of the St. John Ambulance Railway Class at Chipping Sodbury (Gloucestershire) on Oct. 5th, Mr. Alfred Henry Grace, L.S.A. Lond., was presented with a hunting crop as a mark of appreciation of his services as honorary lecturer.

VACCINATION IN PLYMOUTH.—At the meeting of the Plymouth board of guardians held on Oct. 4th the sub-committee recommended that as 855 out of 939 cases of vaccination took place at the houses of the persons vaccinated during the year ended June last the public vaccinator should be requested, as far as possible, to ask parents to take their children to his surgery for the purpose. After some discussion the report was adopted.

UNIVERSITY OF GLASGOW.—It is announced that Dr. W. R. Smith, professor of forensic medicine and director of laboratories of state medicine in King's College, London, has been adopted by the Conservative and Liberal Unionist Association of the Universities of Glasgow and Aberdeen as their Parliamentary candidate in succession to Mr. J. A. Campbell, the present representative, who will retire at the next election.

UNIVERSITY OF OXFORD.—The following members of the University have been elected to entrance scholarships at London medical schools: E. P. Cumberbatch, B.A., Keble College, to a senior scholarship in science at St. Bartholomew's Hospital; E. L. Kennaway, B.A., New College, to the University scholarship at the Middlesex Hospital; and C. Beards, B.A., Jesus College, to a Universities scholarship at Charing Cross Hospital.

UNIVERSITY OF CAMBRIDGE.—An important proposal has been made by the Council of the Senate providing for the mutual recognition by the Universities of Cambridge, Oxford, and London of their several entrance examinations—Previous, Responsions, Matriculation, Senior Local, &c.—Mr. J. J. Lister, F.R.S., St. John's, has been appointed demonstrator of comparative anatomy.—At Trinity College Mr. K. Lucas and Mr. N. R. Campbell, who graduated with first-class honours in natural science, have been elected Fellows.

A NEW ST. PETERSBURG ASYLUM FOR THE INSANE.—On the initiative of Dr. A. G. Konosevitch a hand-some asylum for the insane has been erected at his expense in the Pesotchni Ulitr. The *Novosti*, commenting on the event, makes disparaging reference to such public accommodation for this purpose as exists, saying it is cramped and tends only to make the inmates' cases hopeless of cure. In the Konosevitch Institute every appearance of the ends to which it is devoted is, so far as possible, suppressed. The windows are not iron barred and each patient has a separate light room, decorated in modern style. There is nothing of the barracks about the place. Reading rooms, billiards, and so on are provided. Violent patients are effectually isolated so that their cries are not heard by the other patients. The asylum consists of two buildings for male and female inmates respectively and they are separated by a large garden. It cost £40,000.

LITERARY INTELLIGENCE.—Mr. Edward Stanford will publish on Oct. 15th "Stanford's Geological Atlas of Great Britain." The book is based upon Reynolds's Geological Atlas, the second edition of which was issued in 1889. While the general plan of the older work has been followed the text has been entirely rewritten and amplified by Mr. Horace B. Woodward, F.R.S., F.G.S., who has also edited the maps which were based originally to a large extent on those of the Geological Survey and have now been revised from the later maps published by the same authority. The descriptions of the geological formations, with lists of localities for fossils, have been extended and notes on the geological features of seaside resorts and of the scenery observable along the main lines of railways have been appended. The text contains 17 sections and views and the atlas now comprises 34 coloured maps and 16 double-page plates of fossils.—Mr. Frederick Graves, a graduate in medicine of the University of Edinburgh, has written a novel of medical student life of that city under the title of

"Ombra"; it will be published shortly by Mr. George A. Morton.

THE SANITARY INSTITUTE.—His Majesty the King has graciously consented to give his patronage to the Sanitary Institute. The institute was founded in 1876 and it is carrying on a large work in teaching and examining in hygiene and sanitary science, both in the United Kingdom and in other parts of the Empire. It maintains in London a permanent museum of sanitary appliances, open free to the public. Its members and associates number over 3000.

A STRICKEN RUSSIAN DISTRICT.—A correspondent of the *Novoe Vremya* in the Sisransk district mentions some villages on the Volga where there are about 5000 inhabitants called Tchuvasch who live in such filth that nearly all suffer from skin disease and trachoma, so that "blind Tchuvasch" has become a by-word. The medical aid available is too limited to cope with the evil which is growing more and more accentuated every year.

THE GUILD OF ST. LUKE.—The second annual festival of the Birmingham branch of the Guild of St. Luke will be held on St. Luke's Day, Oct. 18th, in St. Philip's Church, Birmingham, when a sermon will be delivered by the Lord Bishop of Worcester. This branch of the guild has been in existence for more than a year and its results are very gratifying. The honorary secretary is Mr. W. T. Elliott, 65, Temple-row, Birmingham, from whom any information may be obtained.

PATENT MEDICINES.—From an official statement issued by the Inland Revenue Department it appears that in the year ending March 31st, 1904, there were granted to medicine vendors in the United Kingdom 38,462 licences at 5*s.* each, yielding £9619 15*s.* to the Exchequer. The total amount received for stamps on patent medicines was £323,665 17*s.*, the number of stamps issued being as follows: at 1½*d.* each, 31,276,489; at 3*d.* each, 7,332,921; at 6*d.* each, 1,049,057; at 1*s.* each, 125,644; at 2*s.* each, 17,319; and at 3*s.* each, 8817—total, 39,810,247, the rates varying according to the price of the medicine.

GLASGOW EASTERN MEDICAL SOCIETY.—The opening meeting of the session was held on Oct. 5th, when the President, Dr. James Dunlop, delivered an address on the Sanatorial Treatment of Consumption. The following were elected office bearers for the session 1904-05. President: Dr. James Dunlop. Vice-President: Dr. Miller Semple. Secretary: Dr. P. S. Buchanan. Treasurer: Dr. J. Wilson Mathie. Reporting secretary: Dr. Hugh H. Borland. Sealkeeper: Dr. Thomas Russell. Council: Dr. Joseph Green, Dr. John A. C. Macewen, Dr. A. Laurie Watson, Dr. John Anderson, Dr. W. Adam Burns, and Dr. John W. Findlay. Auditors: Dr. Robert Wilson and Dr. T. C. Barras.

UNWHOLESOME COCKLES.—At the meeting of the Torquay town council held on Oct. 4th the medical officer of health reported further cases of illness caused by eating cockles obtained from the river Teign. The town clerk was instructed to call the attention of the Devon county council to the matter and also to write to the Local Government Board on the subject.—At a meeting of the St. Germans (Cornwall) rural district council held on Oct. 6th the chairman read the results of an examination of cockles taken from Millbrook lake. The cockles were found to be contaminated with sewage and unfit for food. It was decided to print the report in question and to circulate copies in Millbrook and the district.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The opening meeting of the tenth session of this society was held on Oct. 6th and the following office-bearers were elected for the ensuing year:—Honorary President: Mr. H. E. Clark. President: Dr. J. Hamilton. Vice-Presidents: Professor R. Stockman and Dr. T. K. Monro. Treasurer: Dr. T. Forrest. Secretary: Dr. J. Weir. Editorial secretary: Dr. R. W. Forrest. Sealkeeper: Dr. A. Wauchope. Extra members of Council: Dr. John Stewart, Dr. D. Macgilvray, and Dr. R. J. Carroll. Court Medical: Mr. T. Richmond, Dr. J. C. A. Smith, Dr. G. H. Edington, Dr. A. Roxburgh, and Dr. John Brown. Governor of Victoria Infirmary: Dr. C. E. Robertson.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AITKEN, ROBERT Y., M.D. Glasg., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Blackburn and East Lancashire Infirmary.

BARBER, G. W., M.R.C.S., L.R.C.P. Lond., has been appointed Acting District Medical Officer and Public Vaccinator, Kalgoorlie, West Australia, *pro tem.*

BLACKFORD, JAMES VINCENT, M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent at the City and County Asylum, Fishponds, Bristol.

CUDMORE, ARTHUR MURRAY, L.R.C.P. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Adelaide Hospital, South Australia.

GUNN, ALBERT A., M.B., Ch.B. Edin., has been appointed Honorary Assistant Physician to the Blackburn and East Lancashire Infirmary.

HEATHCOTE, HENRY CHARLES, M.B., B.Ch. Vict., has been appointed Medical Officer for the Newton St. Loe District by the Keynsham Board of Guardians.

HILL, ALFRED WILLIAM, M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Ophthalmic Surgeon to the Adelaide Hospital, South Australia.

LEICESTER, MORTON EDMUND, M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Lerryn District by the Liskeard (Cornwall) Board of Guardians.

MAGAREY, FRANK, M.B., Ch.M. Syd., has been appointed Honorary Assistant Surgeon to the Adelaide Hospital, South Australia.

MAPLETON, HENRY BANBURY, M.A. Oxon., M.D., C.M. Edin., D.P.H. Lond., has been re-appointed Medical Officer of Health for the Dawlish (Devon) Urban District.

MARTIN, JOHN M. H., M.D. Vict., F.R.C.S. Eng., J.P., has been appointed Honorary Consulting Surgeon to the Blackburn and East Lancashire Infirmary.

MORGAN, THOMAS WHITWORTH SEWELL, M.R.C.S. Eng., L.S.A., has been appointed Medical Officer for the Preston District by the Keynsham Board of Guardians.

ROGERS, RICHARD SANDERS, M.D. Edin., M.D. Adel., has been appointed Honorary Physician to the Adelaide Hospital, South Australia.

SAWYER, JAMES E. H., M.A., M.D. Oxon., M.R.C.P. Lond., has been appointed Pathologist at the General Hospital, Birmingham.

STEVENSON, ROLAND A., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Superintendent at the London Open-air Sanatorium, Pinewood, Wokingham, Berks.

TROTT, FREDERICK THOMAS, L.D.S., R.C.S. Eng., has been appointed Honorary Dentist to the Adelaide Hospital, South Australia.

VALLACK, A. S., M.B., Ch.M. Syd., has been appointed Visiting Surgeon and Dispenser to the Gaol at Berrima, New South Wales, Australia.

WADMORE, J. CHRISTOPHER, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant Resident Medical Officer at the London Open-air Sanatorium, Pinewood, Wokingham, Berks.

WILLETT, GEORGE GILMORE DRAKE, M.R.C.S. Eng., L.S.A., has been re-appointed District Medical Officer by the Keynsham (Somerset) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Assistant Surgeon.

BIRMINGHAM, CONVALESCENT HOSPITAL AND HOME FOR CHILDREN, Moseley Hall.—Honorary Acting Surgeon.

BURY INFIRMARY.—Junior House Surgeon. Salary £80, increasing to £90, with board, residence, and attendance.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100, with board and lodging.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120, with board and lodging.

DEVON COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £150, rising to £200, with board, lodging, and washing.

DOWNPATRICK, DOWN DISTRICT LUNATIC ASYLUM.—Junior Male Assistant Medical Officer, unmarried. Salary £100 per annum, with apartments, board, washing, &c.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Resident Medical Officer. Salary £100 per annum, with board, residence, and laundry.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House Physician and House Surgeon. Salary £80 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70, with board, residence, and washing.

HORTON INFIRMARY, Epsom.—House Surgeon. Salary £.0 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, W.—House Physician for six months. Salary £30. Also Pathologist and Curator of Museum. Honorarium 50 guineas per annum.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—Resident House Surgeon for six months. Salary at rate of £80 per annum, with board.

MANCHESTER JEWISH HOSPITAL.—Resident Medical Officer. Honorarium commencing £80.

MANCHESTER, MONSALL FEVER HOSPITAL.—Fourth Medical Assistant. Salary £100 per annum, with board, lodgings, and washing.

MARGATE ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon, as Junior and Senior for six months respectively. Salary at rate of £80 and £120 per annum, with board and residence.

NEW HOSPITAL FOR WOMEN.—Senior Assistant (female) in the Out-patient Department.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician, also House Surgeon, both for six months. Salaries at rate of 50 guineas a year, with board and residence.

PORT ELIZABETH, MUNICIPAL CORPORATION OF.—Medical Officer of Health. Salary £650, rising to £750.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—House Physician and Casualty House Surgeon (males); also House Physician and House Surgeon (females). All for six months.

ROYAL LONDON OPHTHALMIC HOSPITAL, City road, E.C.—Senior House Surgeon. Salary £100, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, washing, and lodging.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Resident Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and laundry.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £160 per annum, increasing to £200, with apartments, board, fuel, lighting, and washing.

WAKEFIELD, WEST RIDING ASYLUM.—Assistant Medical Officer. Salary £140, rising to £160, with apartments, board, washing, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On Oct. 9th, the wife of Hanway Beale, M.D. Lond., of Retford, of a daughter.

HERBERT.—On Oct. 7th, at Rut'and-avenue, Liverpool, the wife of Major H. Herbert, I.M.S., of a son.

MORGAN.—On Oct. 4th, at Hôtel des Balances, Lucerne, the wife of Captain Edgar Morgan, I.M.S., of a son, prematurely (stillborn).

MARRIAGES.

ANNING—HAIGH.—Oct. 5th, at the parish church, Otley, Yorks, by Rev. Neville Egerton Leigh, vicar of Kirkstall, assisted by Rev. Morris Young, George Paul Anning, M.R.C.S. Eng., L.R.C.P. London, of Kirkstall, Leeds, to Clara Evelyn, elder daughter of Frederick Haigh, late of The Holme, Bramhope, now of Lyddon-terrace, Leeds.

ATKINS—SMITH.—On Sept. 29th, John Atkins, M.B., F.R.C.S., to Elizabeth May, daughter of J. D. Smith, of Halesworth-road, S.E.

BATLEY—HAYLETT.—On Oct. 6th, at St. Mark's, Dalston, by the Rev. C. E. Cardo, B.A., Albert Brook Batley, M.R.C.S. Eng., L.R.C.P. Lond., son of the late Joseph Batley of Huddersfield, to Edith May, daughter of the late Ernest Albert Haylett of Brentwood.

BEATTY—DOUGLAS.—On Oct. 5th, at St. John's Episcopal Church, Edinburgh, Samuel Beatty, M.B., C.M., Pitlochry, to Verboe Borikae (Nurse Douglas, R.S.N.I.), eldest daughter of Dr. H. W. Moncrieffe Douglas, Indian Medical Staff.

FOTHERBY—BARRETT.—On Oct. 5th, at St. John the Baptist's, Kensington, by the Rev. Hector de Courcelles, M.A., Henry Arthur Fotherby, L.R.C.P., M.R.C.S., of Headcorn, Kent, son of H. I. Fotherby, M.D. Lond., of Woodthorpe Cote, Reigate, to Jane (Bee), eldest daughter of Dr. A. E. Barrett of Holland Park-avenue and granddaughter of the late Hon. Thomas Robert Keppel.

DEATHS.

EDMONDS.—On Oct. 7th, at Fowey, Cornwall, Frederic Hermenigildo Edmonds, M.R.C.S., L.R.C.P., of 21, Croal-street, Georgetown, Demerara, aged 55 years.

MACKENZIE.—On Sept. 25th, at Bombay, John Alexander Mackenzie, M.D., late of Balham, London, eldest son of the Rev. D. S. Mackenzie, The Manse, Gairloch, Ross-shire, and son-in-law of the late John Livy, M.D., of Bolton-le-Moors, aged 51.

PETERS.—On Oct. 7th, at Westwood, Ryde, Isle of Wight, Edmund Henry Peters, M.D., aged 84 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PALMISTRY OR PSEUDO-PATHOLOGY?

THE palmist who in a recent trial maintained that he could diagnose a bilious tendency from an inspection of the palm of the hand might certainly have quoted precedent in his own favour. The older palmists or "chiromancers" professed to be able to discover a man's state of health in precisely the same manner. Thus, Richard Sanders, writing on "Physiognomie and Chiromancie" in 1653, deals at very great length with the aspect of the hand as an index to the state of the body. From the lines of the hand he professes to discover whether a man is a gouty subject or long-lived or eupeptic, whether he is suffering from a wound in the head, or, in the case of a woman, whether she will die in childbed. Under each of his 48 diagrams of the palm of the hand at least one medical explanation is to be found. These explanations are manifestly based on the doctrine of "signatures," according to which even the lines in the hand are a kind of signal from the unseen world to the seen. Thus, lines crossing one another on the palm of the hand betoken diseases, accidents, sudden changes, and crises. Astrology, which is in itself a perfectly arbitrary form of signaturism, plays a large part in chiromancy. Different parts of the hand are presided over by planets and stars, such as the sun or Venus, or by the signs of the Zodiac, and thus any given line in the hand may be explained in reference to the attributes of a given celestial body or house. Supposing, for instance, that a part of the hand is presided over by the Zodiacal sign of the crab, then lines in this part will be explained as evidence of a tendency to cancer. Paracelsus worked out the "science" of palmistry according to these signaturist ideas, but since his time some observation and folk-medicine have crept into chiromantic lore. Thus, eastern palmistry is doubtless the offspring of signaturism, but it also contains some beginnings of pathological method and knowledge. Jealous Mahomedans are said to allow Christian physicians to inspect only the hands of the invalids in their harems. The hand is thrust out from behind a curtain and disease must be diagnosed from an inspection of its shape, colour, lines, and temperature. Is this pathology or merely palmistry, or both?

DESTRUCTION OF CATS.

To the Editors of THE LANCET.

SIRS,—I am the foundress of the "Islington Lost Cats' Shelter," and reside on the premises, destroying with my own hands all the unwanted cats and dogs we are unable to keep or find good homes for. It is therefore my painful duty to take the lives of thousands of animals during the year and this I do by means of lethal boxes. I formerly drowned cats in a galvanised wire cage, plunged instantaneously into lukewarm water, and this causes death in about one minute. Public opinion was, however, very much opposed to my method of killing and some writers in the leading cat fanciers' journal, *Our Cats*, wrote against it and me in words of strong condemnation. I have used chloroform for some time, but I am myself very doubtful as to its being really a merciful way of destroying cats. My boxes are of the ordinary kind, air-tight chambers, in which the required quantity of chloroform is placed on a piece of cotton-wool. Very often the poor little creatures cry and jump about and struggle in evident distress, so how can this be really merciful? My old method of drowning was far quicker. Most of those who write on the subject are, I fancy, sentimental women—possibly hysterical women. I am giving my time, money, and my life to the service of dumb animals and the mitigation of some, at least, of the suffering of London's stray cats and I wish, therefore, to destroy those who have to die in the most humane manner possible. Will some of the medical men who read your valuable journal be so kind as to give me their candid opinion as to whether death by chloroform is the best for animals, and if not, which is the best method of destroying? I should be glad also to know if they consider drowning in a cage completely covered with lukewarm water as cruel as my critics have declared it to be.

I am, Sirs, yours faithfully,

Islington, N., Oct. 4th, 1904. KATE CORDING.

MOTOR CARS AND MEDICAL MEN.

A CORRESPONDENT has forwarded to us a copy of the "Continental" Handbook for Automobilists. Contrary to the apparent meaning of the title it deals with places in the United Kingdom. It is arranged alphabetically and under the various towns and villages are given certain particulars as to the distance from neighbouring towns, the names of firms supplying oil or petrol or those willing to undertake repairs to motors, and in many of the towns or villages is given a list of medical men. This item it is which has vexed the soul of our correspondent. He certainly has right upon his side in one way but, on the other hand, there is perhaps something to be said for the desirability of a handbook for travellers giving information as to where medical men may be found. Motorists not infrequently come to grief themselves. Still more frequently do they cause injuries to others and it certainly is advisable that they should know not only where they can obtain repairs to their machines but also to those whom they may unfortunately injure, or even for themselves. We have looked

through some of the lists of medical men. The spelling of the names in many cases is very incorrect; neither do we understand the principle upon which the names are arranged in order. Moreover, in a town like Glasgow, which we should say at a rough estimate possesses some 730 medical men, only one medical man's name is mentioned. Of course, we should not expect the guide to put in 730 names, but either it ought to put them all in or else none. To put in only one is absurd. On the whole we think that the plan adopted in some of the towns—namely, that the names and addresses of medical men are obtainable at the hotel or hotels—is preferable. In large towns the names of medical men would of course be found in the local directory, which would be sure to be found at the hotel, while in small towns or villages the landlord of the hotel or inn would naturally be able to give the names of medical men, though of course no list of names should be exhibited, nor on any person inquiring should one practitioner be recommended rather than another. We do not suppose that in any instances the medical men mentioned have been consulted as to whether or not their names should appear, for if they had we are quite certain that all of them would have refused permission.

THE EXAMINATION FOR THE CAMBRIDGE DIPLOMA OF PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—I have recently been in for the first part of the Camb. D.P.H. and passed it. During the summer I left my practice and went up for the six weeks' course of instruction given at the Cambridge laboratories. I think it only right that all men anxious to obtain the D.P.H. Camb. should know what splendid opportunities they have of learning their work at Cambridge if they take the course of instruction which I did. The cost is slight; in my case I hardly think my fees paid for reagents and breakages.

In conclusion, I cannot speak too highly of the teachers, particularly in the chemical laboratory. They do their utmost to make you take it in and I am sure if a man does not pass it is entirely his own fault after being up there. Will you please make these facts known in your journal?

I am, Sirs, yours faithfully,

Oct. 11th, 1904. D.P.H.

THE APPEAL ON BEHALF OF MISS E. B. PELLATT, L.S.A.

THE treasurer, Surgeon-Colonel F. H. Welch, 8, Brandram-road, Lee, S.E., begs to acknowledge the receipt of the following sums additional to those previously recorded:—

	£	s.	d.
Dr. Violet A. P. Coghill	0	10	0
Dr. Alice D. Vickery ...	1	1	0
Dr. Constance E. Long	1	1	0
Dr. R. Jessop	0	10	6
Dr. Alice N. V. Johnson	1	0	0
Dr. A. G. Grogan ...	2	0	0
Mrs. Dowson	1	0	0
Mr. J. E. Dowson ...	1	0	0
Mrs. Maples	0	10	0
Dr. Beatrice F. Lovibond	0	5	0
Dr. I. Burney Yeo ...	1	1	0
Dr. Adeline M. Roberts	1	1	0
Miss Edith M. Wigan	5	0	0
A Friend	1	0	0
Mr. Lionel V. Cargill	1	1	0
Anon.	0	5	0
Dr. Flora Butcher ...	0	10	6
Rev. F. G. and Mrs. Latham (second donation)	0	10	6
Dr. Sophia Jex-Blake	2	2	0
Mr. James B. Jordan	1	0	0
A. V.	0	2	6
C. E. T.	1	0	0
A. J. T.	1	0	0
Anon.	0	5	0
Miss L. Hollis	0	2	6
Miss Florence Dismore	1	1	0
Dr. Charles Steele (second donation) ...	1	1	0
Dr. Mary D. Sturge ...	0	10	0
Anon.	1	1	0
Miss A. K. Pellatt	1	0	0
A Thankoffering, a Poor Clergyman	0	5	0
Mrs. Scharlieb, M.D., ...	10	10	0
Mrs. Bishop	5	0	0
Miss Beck	1	1	0
Rev. W. Osburn B. Allen	1	0	0
Dr. Eveline A. Cargill...	1	1	0
Miss Dove	1	0	0
Miss Grierson	1	0	0
Miss Rintoul	1	0	0
Dr. Katharine M. N. Maguire	1	1	0
Rev. C. E. Bowden ...	0	2	6
Dr. Agatha Porter	0	10	6
Dr. Amelia M. Le Pelley	2	2	0
Mrs. Roscoe	1	10	0
Mr. H. Gaselee	5	0	0
Dr. Helen M. Wilson ...	2	2	0
Mr. James Clark	1	0	0
Mrs. James Clark	5	0	0
Mrs. W. S. Clark	2	0	0
Mrs. B. C.	1	1	0
Dr. Ann E. Clark	3	3	0
Lady Joicey	5	0	0
Dr. Zilla M. Scruby ...	0	10	6

THE ARTIFICIAL INDUCTION OF SLEEP IN CHILDREN IN INDIA.

IN the September number of *Man* Captain J. H. Anderson describes a curious method, largely practised in the Simla district of the Himalayas, of inducing sleep in children by means of water. A bed is prepared by levelling a piece of ground in the immediate vicinity of a spring of water. The bed is generally trenched round to carry off the water after use and is covered with a thick layer of dried leaves or matting. The child is placed on this bed either on his side or face downwards and is entirely covered with one or more folds of a blanket with the exception of the upper part of the head. A hollow bamboo spout, about 18 inches long, is arranged to allow of a continuous flow of water, with a fall of from one to two feet, *against* but not *on* the child's head. It takes about a quarter of an hour before the child falls into a heavy slumber which lasts for about three or four hours. This custom is carried on all the year round—usually from 7 to 11 A.M. and from 2 to 5 P.M.; generally under the shade of a large tree but frequently out in the open. The children of the better classes have a small hut of matting or thatch work made for them over the bed. Captain Anderson adds that the natives state that if their children are not subjected to this treatment from infancy to the age of about ten or 11 years, they are subject to a disease which causes them to turn yellow, to pine away, and to die. The custom seems to be confined to Hindoos and to the Simla district.

POST-MORTEM CÆSAREAN SECTION.

To the Editors of THE LANCET.

SIRS,—The husband or executor or, as such cases are often consequent upon an accident to the mother, the coroner should sanction a *sectio cadaveris*. In the *Dublin Quarterly Journal of Medical Science* for August, 1858 (p. 22), the questions of the need of the father's consent and of the medical adviser's position are fully discussed in their technical and their common-sense aspects.

I am, Sirs, yours faithfully,

Adelphi-terrace, W.C., Oct. 7th, 1904. STANLEY B. ATKINSON.

A POULTICE.

WE have received from Mr. H. M. Theedam, St. James's-road, Dudley, a specimen of his "All Ready" poultice. This poultice consists of a certain amount of linseed sewn up into a linen or cotton covering so as to form a pad. The advantages claimed by the manufacturer are that it is cheaper than the usual method, that there is no dirt or mess, and that there is no need for spatulas and bowls for preparing the poultice. The directions given on the label attached to each poultice are to boil it gently for three minutes. It certainly would save trouble to have the linseed all prepared and capable of application without the usual method of preparation, but one of the great uses of the ordinary linseed poultice is that the linseed itself comes into contact with the skin or slough and where this is not desired an ordinary fomentation is much more cleanly and acts just as well. The poultices before us are made in a circular pattern of three, four, five, and six inches in diameter respectively, or they can also be had of a triangular shape, and the prices seem reasonable. There is one objection which we find and that is that the label bearing the directions, which is pasted on the back of each poultice, is covered with a pigment containing, among other matters, eosin, and this of course dissolves at once in water in which the poultice is soaked. It is not certain, of course, that this would have any injurious effect upon a wound but still it would be better away.

Don Solano.—We think that the official of the chapel should have contented himself with simply mentioning that the lecture was to be delivered. The subject undoubtedly is of importance and it is certainly the duty of all religious bodies to care for the bodies as well as the souls of their members.

J. W.—The General Medical Council publishes a volume of Minutes of its proceedings. This copy can be obtained at the offices of the Council, 299, Oxford-street, London, W.

R. W. R.—We do not suppose that the medical man in question is responsible for the insertion of the paragraph. We do not think that any further notice need be taken of it.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (22nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (18th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Mr. S. G. Shattock: Prehistoric Calculus.—Dr. J. F. H. Broadbent: Some Cases of Toxæmic Jaundice and Interstitial Hepatitis.—Dr. W. F. V. Bonney: Karyokinetic Figures in Papilliferous Ovarian Cysts.—Dr. F. W. Price: Cystic Kidney.

CHELSEA CLINICAL SOCIETY (Chelsea Dispensary, Manor-street, King's-road, S.W.).—8.30 P.M. Dr. V. Dickinson (President): Address.

WEDNESDAY (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Dr. D. H. Scott (President): Demonstration on the Reconstruction of a Fossil Plant.

FRIDAY (21st).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, W.).—5.30 P.M. Cases will be shown by Dr. C. O. Hawthorne, Dr. R. Hutchison, Mr. S. Stephenson, Dr. L. Guthrie, Mr. A. Edmunds, Dr. E. Cautley, Mr. G. Pernet, and others. Papers:—Mr. R. C. Lucas: On an Ill-developed Upper Lateral Incisor Tooth as a Fore-runner of Hare-lip or Cleft Palate.—Dr. S. Gilford: On Two Cases of Congenital Diaphragmatic Hernia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Galloway: Clinique. (Skin.) 5.15 P.M. Mr. J. E. Lane: The Treatment of Gonorrhœa.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. Jones: Causation of Insanity and how prevented by Medical Teaching.

TUESDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. (Medical.) 5.15 P.M. Dr. D. Robinson: Disorders of Menstruation.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Two Serious Forms of Valvular Disease of the Heart.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. Collier: Methods of Examining Cases.

WEDNESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. C. Ryall: Clinique. (Surgical.) 5.15 P.M. Sir A. D. Fripp: Recent Variations in the Technique of Certain Common Operations.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (North-Eastern Fever Hospital, St. Ann's-road, N.).—2.30 P.M. Dr. H. Cuff: Demonstration on Fevers.

THURSDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. P. Stewart: Facial Paralysis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Treatment of Moveable Kidney.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Dr. Malcolm: The Management of Cases of Abdominal Surgery.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Lecture: Dr. J. E. Squire: The After-Effects of Pleurisy (illustrated by cases). (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Dr. D. B. Lees: Hydrocephalus.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM (City-road, E.C.).—2.30 P.M. Mr. S. Edwards: Lecture-Demonstration on Diseases of the Rectum.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture:—Mr. W. Edmunds: Diseases of the Prostate.

FRIDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Skin Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. Collier: Electrical Testing.

SATURDAY (22nd).—ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM (City-road, E.C.).—2.30 P.M. Mr. P. Furnivall: Clinical Demonstration in the Out-Patient Department.

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 13th, 1904.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Oct.	7	29·50	NNW	0·37	61	52	47	47	48	Raining
,,	8	30·01	W.	0·03	88	54	42	42	45	Cloudy
,,	9	30·24	N.	...	90	55	39	39	40	Cloudy
,,	10	30·22	S.W.	0·01	71	59	40	51	52	Cloudy
,,	11	30·24	S.W.	0·01	60	59	52	55	56	Foggy
,,	12	30·21	N.E.	...	80	58	54	53	55	Fine
,,	13	30·49	E.	...	82	57	42	43	45	Fine

During the week marked copies of the following newspapers have been received:—*Manchester Evening Chronicle, Eastern Daily Press, Western Mail (Cardiff), Bolton Daily Chronicle, Westminster Gazette, Irish Times, Spectator, East London Observer, Richmond Times, Dublin Herald, Pall Mall Gazette, Morning Post, Morning Leader, Daily Chronicle, Times, British North Borneo Herald, Yorkshire Daily Observer, Liverpool Courier, South Wales Daily Echo, Cambridge Chronicle, The Health Resort, &c.*

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